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ABSTRACT

This five-section handbook contains provisions of the education law, commissioner's regulations, and related state education department policies and guidelines that form the legal basis of occupational education programs in New York. Section 1 of the handbook provides a brief description of why a restructuring of the occupational education program is necessary and how the new curriculum was developed. Section 2 describes the occupational education program, states diploma requirements, and discusses state-developed tests, program evaluation and planning, and state-approved programs. Section 3 lists the various state sequences of occupational education by instructional program area, together with course descriptions and prerequisite study, and discusses the required Introduction to Occupations course. Section 4 deals with a variety of other aspects of the occupational education program, including student leadership, adult/continuing education, handicapped/special education students, the use of locally developed sequences instead of state sequences, and the process for obtaining state approval for such substitutions. Section 5 contains recommendations for implementing the new curriculum, describes personnel certification requirements, and provides information on facilities and equipment, assessment reports, and advisory committees. Appendixes contain the following items: a chart of state education department units and their responsibilities; the full text of the Futuring Process statement of the purposes of occupational education; a list of Introduction to Occupations modules; a summary of criteria for occupational education for general education credit; a list of critria for state-approved programs; and a sample Sequence Approval Form. (KC)

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THE OCCUPATIONAL EDUCATION CURRICULUM OF NEW YORK STATE

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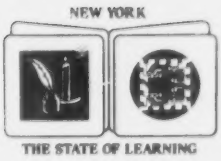

A HANDBOOK FOR ADMINISTRATORS AND COUNSELORS

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ASSISTANT COMMISSIONER FOR OCCUPATIONAL AND CONTINUING EDUCATION
DIRECTOR, DIVISION OF OCCUPATIONAL EDUCATION INSTRUCTION

October 1989

TO: District Superintendents of Schools
Superintendents of Public and Nonpublic Schools
Directors of Occupational Education
Principals of Public and Nonpublic Secondary Schools
Guidance Counselors, Grades 7-12
Chairpersons of Agricultural, Business/Marketing, Health Occupations, Home Economics, Technical, Trade and Industrial, and Technology Education Departments

FROM: Willard R. Daggett, Director
Division of Occupational Education Instruction

SUBJECT: Revised Occupational Education Handbook

Enclosed is copy of "The Occupational Education Curriculum of New York State -- A Handbook for Administrators and Counselors -- 1989 Edition." This publication contains provisions of Education Law and Commissioner's Regulations, and attendent State Education Department policies and guidelines, which form the legal basis of Occupational Education programs in the schools of this State. It is in loose-leaf form to allow easy replacement of pages which become outdated.

Although intended to assist administrators in maintaining quality programs of Occupational Education, and counselors in guiding students in selection of programs of study, the publication should be made available to interested teachers.

Communications regarding the Handbook should be directed to:

Dr. Willard R. Daggett, Director
Division of Occupational Education Instruction
One Commerce Plaza, Room 1623
Albany, New York 12234
(518) 474-2451

FOREWORD

One of the responsibilities of the Office of General and Occupational Education is to ensure that school administrators and guidance counselors know Commissioner's Regulations which pertain to occupational education, understand what is required to be in conformance with those sections of Commissioner's Regulations, and implement appropriate programs of occupational education. This Handbook has been developed as one means of discharging this responsibility.

SECTION I of this Handbook provides a brief description of why a restructuring of the occupational education program is necessary and how the new curriculum was developed, and quotes the definition of occupational education given in Commissioner's Regulations, and states its purpose.

SECTION II describes the occupational education program as an educational continuum, from its beginning in the elementary grades through the mandated middle grades programs and secondary level occupational education sequences which may be used to fulfill graduation requirements. It states diploma requirements, both Regents and local, and attendant Department policy statements -- including those pertinent to the use of occupationally related mathematics and science courses and other occupational education courses to satisfy general education requirements -- and discusses State-developed tests. Program evaluation and planning, and State-approved programs are also described.

SECTION III lists the various State sequences of occupational education, by instructional program area, together with course descriptions and prerequisite study, and such recommendations as are appropriate. Introduction to Occupations content, which is a required part of every occupational education sequence, is also discussed here, both as a discrete course and integrated into other courses of the sequences.

SECTION IV deals with a variety of other aspects of the occupational education program, including the substitution of locally developed sequences for State sequences, and the necessity, and process, of obtaining Department approval before effecting the substitution.

SECTION V contains recommendations for implementing the new curriculum. Required certification of personnel to teach specific courses is stated. Facilities and equipment are included as are the Comprehensive Assessment Report and Consultant/Advisory Committees.

The APPENDIX contains a chart of pertinent State Education Department Occupational Education units and the program responsibilities of each. This information is provided to assist educators in the field in contacting the proper Department unit to obtain or provide information. The full text of the Futuring Process' statement of the purposes of occupational education is also included, as are a list of Introduction to Occupations modules, a summary of criteria for occupational education for general education credit, criteria for State-approved programs, and a sample Sequence Approval Form.

Although some of this Handbook's contents, for example quotation of Commissioner's Regulations and some Department policy statements, are the same as contained in the general "Handbook on Requirements for Elementary and Secondary Schools -- Education Law, Rules of the Board of Regents, and Regulations of the Commissioner of Education -- Second Edition," they are organized and expanded upon within this Handbook in a manner which should provide considerable aid to local educators responsible for implementing, or scheduling students into, a program of occupational education.

The format of the five Sections consists of a statement of pertinent Commissioner's Regulations and/or Education Law followed by useful information, usually in the form of Department **Policy** and/or **Guidelines**. All school administrators and counselors should become well acquainted with the contents of this Handbook.

LORRAINE R. MERRICK
Assistant Commissioner
Office of General and Occupational Education

WILLARD R. DAGGETT
Director
Division of Occupational Education Instruction

CONTENTS

Section		Page
I	Introduction	1
	The Basis of the New Occupational Education Curriculum	1
	New Program Directions for Occupational Education	1
	Occupational Education -- Definition and Purpose	2
II	The Instructional Program	3
	The Educational Continuum	4
	Occupational Education -- Grades K-6	5
	Occupational Education -- Grades 6-8	6
	Diploma Requirements	10
	Occupationally Related Mathematics/Science	14
	Occupational Education for General Education Credit	18
	State Tests	20
	Evaluation of Occupational Education Programs	22
	Local Program Planning	22
	State-approved Programs	23
III	Occupational Education Sequences and Programs	25
	Policy on Preparation for Employment and/or Postsecondary Education	25
	Availability of Occupational Education	25
	Credit for BOCES Programs	26
	Introduction to Occupations Component	27
	Occupational Education Instructional Program Areas	27
	Occupational Education Sequence Requirements	32
	Three-Unit Sequences	32
	Five-Unit Sequences	36
	Extended Five-Unit Sequences	37
	Discrete Five-Unit Sequences	41
	Transfer Students	42
	Occupational Education Course/Program Descriptions	42

Section		Page
IV	Other Program Elements	57
	Student Leadership Development	57
	Cooperative Occupational Experience Programs	59
	Adult and Continuing Education Programs	60
	Postsecondary Occupational Education	61
	Locally Developed Curriculum	62
	Students with Handicapping Conditions	63
	Occupational Education Sequences for Special Education Students	65
V	Implementing the Program	69
	Scheduling of Instruction	70
	Teacher Certification	70
	Facilities and Equipment	71
	Comprehensive Assessment Report	72
	Consultant/Advisory Committees	72
Appendix		75
	Purposes of Occupational Education	75
	List of Introduction to Occupations Modules	77
	Summary of Criteria for Using Occupational Education Courses for General Education Credit	78
	Criteria for State-approved Programs	81
	Student Leadership Organizations -- Social Studies Credit	87
	Definition of Terms Used in This Handbook	90
	Program Responsibilities of the Bureaus of the Division of Occupational Education Instruction	91
	Sequence Approval Form	92

SECTION I

INTRODUCTION

In March 1984, the New York State Board of Regents formally adopted the **Regents Action Plan to Improve Elementary and Secondary Education Results in New York.** The Plan laid the groundwork for a series of comprehensive changes in the education requirements for all students in New York State. The Plan, and its provisions, were the culmination of a major review of the State's elementary and secondary education programs, conducted over the preceding three years. The two-year intensive and extensive review of occupational and practical arts education, which came to be known as the "**Futuring Process,**" was a major part of that review.

Nearly 200 representatives of business and industry, social science, students, and teachers and administrators at all levels of occupational and special education met bimonthly as eight instructional area Futuring Committees, to determine what the purposes and programs of occupational and practical arts education should be through the remainder of this century to adequately prepare students for living and working in this ever more rapidly changing world. Additionally, 91 educators served as liaison between the Futuring Committees and educators in their regions, to ensure a flow of information and feedback. The Futuring Committees' recommendations were presented in a series of open regional meetings, to elicit educators' reactions. Chief among these recommendations were that:

1. every high school graduate should have received instruction in basic employment seeking and maintaining skills;
2. every high school graduate should have been prepared to enter employment and/or postsecondary education;
3. education should be a continuum, rather than a series of instructional entities; and
4. occupational education should emphasize instruction toward development of broad, transferable skills common to an occupational area, rather than those required by a specific job.

The incorporation of these recommendations into the Regents Action Plan, and the attendant subsequent revision of the Regulations of the Commissioner of Education, set a new direction for programs of occupational education in New York State. Although the new program directions will affect primarily students in grades 7 through 12, two specific core skills will be part of the new elementary school curriculum. These are keyboarding skills, to be taught as part of the language arts curriculum, and computer literacy, to be taught as part of all elementary school curriculums as appropriate, with special emphasis in the mathematics curriculum. In effecting the Futuring Committees' recommendation of an instructional continuum, students who have acquired the foundation skills as part of their elementary school program will be provided opportunities for developing basic life skills, career awareness, and job readiness skills, and understanding of the impact of various systems of technology upon our society and lifestyles, through mandated studies in grades 7 and 8. At some time in grades 9 through 12, students who elect a program of occupational preparation must complete a unit of study of occupational awareness, job readiness, and preparation for broad career options. Specialized occupational education, leading to the development of entry-level job skills, will typically be offered in grades 11 and 12.

Movement in this new direction required a complete revision of the occupational education curriculums and State tests and, in some areas, changes in teacher certification. An extensive program of inservice education, to prepare educators to implement the new curriculum, became necessary. The magnitude of the changes inherent in this new direction required a gradual implementation over several years; a schedule thereof was adopted. The State Education Department has been developing new curriculums -- Department subject specialists managing teams of outstanding teachers of the subjects and business/industry representatives in creating draft syllabuses -- which after field testing are adopted as State syllabuses. A similar process is being utilized to develop State occupational education proficiency examinations.

The Regents Action Plan also requires that "...all revised syllabi include materials and activities related to ... increasing student awareness of, and information about, the disabled." In order to accomplish this goal, the then Office of Occupational and Continuing Education and the Office for Education of Children with Handicapping Conditions worked cooperatively to ensure that new content reflects information that would increase awareness in regard to the disabled. The Futuring Committees also recommended that new curricula include teaching strategies that would assist occupational educators to provide instruction to students with handicapping conditions who are appropriately placed in their classes.

Effective implementation of new programs of occupational education requires a standard definition of occupational education and description of its purposes. Commissioner's Regulations provide such a definition.

Regulation

CR 100.1(1)

Occupational education means all programs of instruction in agriculture; business, including marketing; home economics; health occupations; technical education; technology education/industrial arts; and trade education.

The **purposes of occupational education,** as determined by the Futuring Process, are listed in the Appendix to this Handbook. A summary of those purposes in very brief form is that:

> **The purpose of occupational education is to provide learning experiences in which all students become aware of a broad spectrum of occupations, and develop skills that are adaptable to personal and career roles and for entry into employment, and to provide to students so electing, learning experiences which will develop skills necessary to employment in specific occupational areas or postsecondary study thereof, thereby preparing students for life as productive members of society.**

SECTION II

THE INSTRUCTIONAL PROGRAM

Regulation

Ed. L. 4602 Occupational education

1. The board of education of each school district shall provide secondary school pupils and adults access to programs of occupational education, commensurate with the interests and capabilities of those desiring and having a need for preparatory training, retraining or upgrading for employment,an develop realistic programs in accord with manpower needs in existing and emerging occupations for present and projected employment opportunities.

2. Occupational education programs and classes shall be organized and conducted by boards of education or arranged through shared services as provided by boards of cooperative educational services, accordance with the rules (of) the regents and the regulations of the commissioner of education.

3. Programs may include pre-vocational activities, occupational classes, apprentice related instruction, cooperative education, work experience, continuing adult occupational education, and other effective means of preparation and of upgrading employment capabilities. Classes for out-of-school youth sixteen years of age and over and for adults may be conducted during the day and/or evening.

4. The board of education of each school district maintaining programs in occupational education, practical arts, vocational and educational guidance, or continuing occupational education for adults has full power and authority:

   a. To employ properly certified directors, supervisors, principals, teachers and counselors and assign them to serve in the schools and classes authorized by this article.

   b. To establish approved courses of study.

   c. To purchase or acquire sites and grounds; to purchase, acquire, lease or construct and to repair suitable shops and buildings or to arrange for shared services.

   d. To purchase necessary machinery, tools, apparatus, books and supplies.

5. School days spent in legal employment by pupils enrolled in approved occupational cooperative education programs who are in part-time school attendance shall be included in the average daily attendance for apportionment of state aid under provisions of section thirty-six hundred two of this chapter.

School districts must, then, provide secondary public and nonpublic resident students and adults access to programs of occupational education through their boards of education or shared services as provided by boards of cooperative educational services. Approved occupational education programs must meet the needs, interest, and abilities of the persons enrolled, and be directly related to entrance, continuance, or advancement in an occupation or field of occupations.

Ed. L. 2045 Non-resident attendance

* * * * *

NOTE: A line of asterisks in the text indicates that one or more entire paragraphs have been omitted from the quoted Regulation.

2. If a pupil resides in a district wherein high school courses are offered, but no vocational high school is available therein, or if vocational high school courses are not available in the academic school or schools designated as herein provided, such pupil may select and attend any other academic school within the state in which vocational courses are available, and the tuition charged, if any, in excess of the difference between the cost of educating such pupil and the apportionment of public moneys on account of the attendance of such pupil, is hereby declared a charge upon the district in which such pupil resides, except however, the cost of transportation of such pupil need not be paid by such district.

* * * * *

Should an occupational education course not be available in the school district of residence, that district, in order to provide access to the occupational education program, may contract with other districts or boards of cooperative educational services for instruction in that occupational subject and must pay nonresident tuition.

CR 141.5 (Summarized)

Approved occupational education programs must maintain standards which provide that:

- training must be related to the occupation for which the student is being prepared;
- the program must provide the minimum entry-level competencies for the graduate to enter into initial employment, while providing a basis for future learning;
- instruction (in public schools) must be by certified persons;
- in the absence of a syllabus, a written training plan is prepared and being followed for each specialized occupational course being offered; and
- persons shall be admitted to classes on the basis of their interest and potential for achieving competence in the occupation.

THE EDUCATIONAL CONTINUUM

The desired result of the Regents Action Plan is a system of education that can quickly and effectively respond to changes in the knowledge and skills required by society in general, and by business and industry in particular. Understanding the needs of society in general, and of employers in particular, is a critical aspect of understanding the needs of students. The curriculum must be based upon these needs, but the instructional program must be designed around how students learn. The educational system must enable students to proceed to advanced levels of competence without duplicating previous learning and without leaving gaps in required skills. The system must be flexible, so that students can enter programs when they are ready and change career directions with minimal disruption.

The occupational education curriculum should be part of a continuous system of education which begins early in childhood and extends throughout a person's lifetime. Occupational education should provide students with broad, transferable skills which are related to life situations and occupations, and which prepare students to be more responsive to change.

The development of occupational education curriculum as an education continuum was based on the assumptions that:

- there are skills common to all specialized occupations;
- students should move gradually into a program of study of specialized occupations;
- entry into study of specialized occupations should be based on student readiness.

Programs of study of specialized occupations are those which prepare students to enter a specific occupational area or occupational cluster, rather than those which provide broad job seeking or job maintaining skills.

OCCUPATIONAL EDUCATION -- Grades K-6

Regulation

CR 100.3(b)(1) Program requirements in grades one through six.

Required Subjects. During grades one through six, all students shall receive instruction in arithmetic, reading, spelling, writing, the English language, geography, United States history, science, health education, music, visual arts, physical education and, where student need is established, bilingual education and/or English as a second language.

Keyboarding

The Regents Action Plan to Improve Elementary and Secondary Education Results in New York states that, "Instruction in keyboarding will be included in the State-developed English Language Arts Syllabus."

With the advent of computers as tools in the home, classroom, and workplace, keyboarding has become an important basic skill. As computers continue to become more prevalent in homes and classrooms, student mastery of fundamental keyboarding techniques and keyboarding functions in entering, retrieving, manipulating, and storing data will be increasingly important.

The following general guidelines should be considered in providing efficient and effective keyboarding instruction.

- Students should be provided instruction in basic keyboarding techniques at the grade level in which they are first expected to use electronic keyboards in learning situations.
- Because of the large number of symbols and command functions available on electronic keyboards, instruction should emphasize correct fingering techniques from home row locations, accuracy rather than speed development being the goal.
- Keyboards (electronic typewriters or computers) should be readily available to students for independent use as practice and for application of new skills learned during instructional time.
- Business education teachers should be involved in the development of keyboarding curriculums, in-service education programs, and the selection of materials and methodology.

A resource guide on instruction in keyboarding in the elementary grades is available from the Department. This guide includes suggested instructional strategies and activities which should assist students in learning and applying keyboarding skills.

Agriculture in the Classroom

In conjunction with the United States Department of Agriculture, the New York State Department of Agriculture and Markets, the College of Agriculture and Life Science of Cornell University, and numerous agriculture agencies in New York State, a curriculum in Agricultural Awareness is being developed for infusion into the core curriculum of grades K-6. Instructional materials are available for grades 3 through 6; grades K-2 to be developed subsequently. A teacher's guide has been developed which shows, by grade level, how and where Agricultural Awareness instructional materials correlate with the Regents goals specific to each elementary curriculum subject area syllabus. In-service education programs are being made available to assist the teacher in adapting and infusing these materials into mathematics, social studies, science, language arts, and health instruction.

Examples of topics for infusion at each grade level include: The History of Agriculture, The Importance of Agriculture, A Comparison of Rural and Urban Life, How Agriculture Supplies Our Basic Needs, Agricultural Careers, and How Food is Produced and Processed from Farm to Table.

Elementary Grades Home Economics Education

The Home Economics Education program in the elementary grades is determined by local school philosophy and objectives, and the facilities available. Learning experiences should be planned reflecting the curriculum of the human development, food and nutrition, textiles design and housing, and environment cores. The program should be coordinated within the elementary education curriculum.

Elementary Grades Technology Education

Presently, there are over 10,000 students in New York State enrolled in elementary school Technology Education programs which develop an understanding of the part technology plays in determining people's lifestyles. Most programs involve an interdisciplinary approach, through which common branch and Technology teachers use laboratory activities to provide practical application of basic skills.

In the elementary schools, Technology Education is often used to build reading readiness. As children manipulate equipment and materials, things like shapes, colors, "smooth," "rough," "long," and "wide" take on real meaning. Publishing activity centers have been instituted in some school districts through which children use language skills to write, print, and publish their own material. A validated study has been completed by the Department which indicates a statistically significant correlation between improved student reading scores and participation within a publishing activity center.

OCCUPATIONAL EDUCATION -- Grades 6-8

Regulation

CR 100.4 Program requirements for students in grades seven and eight

(a) Definitions

(1) Technology education means a program of instruction designed to develop an understanding of systems in fields such as production, transportation, construction, communications and agriculture by emphasizing applied activities through working with tools, machines and devices used in the home and the workplace.

(2) Home and career skills means a program of instruction primarily through applied activities designed to prepare students to meet their responsibilities and understand their opportunities as parents or other members of families, consumers, home managers and wage earners.

(b) Course requirements in grades seven and eight.

(2) Except as otherwise provided herein, students completing grade eight in June 1987 or thereafter shall have completed, by the end of grade eight, the following required instruction or its equivalent:

(v) for students completing grade eight in June 1988 or thereafter, technology education, one unit of study;

(vi) for students completing grade eight in June 1988 or thereafter, home and career skills, three quarters of a unit of study;

* * * * *

(3) The requirements for technology education, home and career skills ... may be met by the integration of the learning outcomes of such subjects into other courses in accordance with the following criteria:

(i) In public schools, the unit of study requirements specified in paragraph (2) (v), (vi) . . . of this subdivision are met.

(ii) In public schools, the subjects of technology education and home and career skills shall be taught by persons certified to teach those subjects.

* * * * *

(iv) In nonpublic schools, the unit of study requirements specified in paragraph (2) (v),(vi) . . . of this subdivision may be met, or their equivalents may be met, by the incorporation of the learning outcomes of such subjects into the syllabi for other courses and/or by appropriate results on examinations which demonstrate student mastery of the learning outcomes of such subjects. The chief administrative officer of a nonpublic school shall document the manner in which such nonpublic school has implemented the provisions of this subparagraph. Such documentation shall be in writing and available for review upon request by the commissioner.

Policy

- The technology education course in grades 7 and 8 is hereafter referred to as "Introduction to Technology."

- Students completing grade 8 in June 1988, and thereafter, shall have completed one unit of Introduction to Technology and 3/4-unit of Home and Career Skills.

- Regulations allow **nonpublic** schools to infuse Introduction to Technology and Home and Career Skills content into other curriculums without adding to the study time. The chief administrative officer must document the manner in which the students are receiving instruction toward attaining the competencies of the Introduction to Technology and Home and Career Skills curriculums.

- **Public** schools considering the infusion of Introduction to Technology and/or Home and Career Skills content into other curriculums must extend the time requirements of the course by the respective 1-unit and/or 3/4-unit of study or equivalent.

- The Introduction to Technology course has been designed so that it can be taught by persons holding existing certification as follows:
  - Teachers certified to teach Technology Education/Industrial Arts and Agriculture are qualified to teach the entire course.

  - Teachers of science are qualified to teach pertinent modules of the Introduction to Technology course; the entire course, however, may not be taught solely by a teacher of science. A chart on page *70* identifies modules which may be taught by science teachers.

- The Home and Career Skills course has been designed so that it can be taught by persons holding existing certification, as follows:

- Teachers holding certification to teach Home Economics are qualified to teach the entire course.

- The Home and Career Skills course consists of a number of discrete units. Persons certified in business education, agriculture, health education, and guidance are qualified to teach specific pertinent units and take part in a team teaching approach to the course in which a certificated home economics teacher must be the lead teacher. No more than one other discipline may be included, however, in the team teaching of any one class section. Further, business, agriculture, and health teachers, and guidance personnel may not, singly or in combination, teach the entire course. Only persons certificated in home economics may teach the entire course. A chart on page 68 identifies modules which may be taught by business education, agriculture education, health education, and guidance personnel.

- A certified elementary education teacher (N-6) may teach . . . Introduction to Technology or Home and Career Skills for a maximum of 5 hours per week, as provided under the incidental teaching provision of Part 80.2(c) of Commissioner's Regulations and with the approval of the Commissioner. The granting of approval for a teacher to teach under the incidental teaching clause will be based on the qualification of that teacher by virtue of having completed at least six credit hours of college study in the appropriate area.

- The delivery of the Introduction to Technology and Home and Career Skills courses may not be wholly accomplished through the incidental teaching provision of Part 80.2(c) of Commissioner's Regulations. Teachers certified in these programs must be the lead teachers, where portions of the programs are delivered through incidental teaching.

Guidelines

- Students may complete the one unit of Introduction to Technology in a single academic year, or the study may be spread over two or three years, starting in 6th or 7th grade and being completed before the end of 8th grade.

- Students may complete the 3/4-unit of study of Home and Career Skills in a single academic year, or the study may be divided into three 1/4-unit sections, taught over two or three school years.

- Options for providing instruction.
  - Nonpublic schools may provide instruction in Home and Career Skills and/or Introduction to Technology in any of the following manners:
    - Identify a teacher to be responsible for instruction of each course and provide separate classes, each following the pertinent syllabus.
    - Divide the content of these courses into several topics which could be placed in several distinct courses. However, when offering these several courses it is important to do so in accordance with the sequential nature of the curriculum. An increase in the time allocation of these several courses may or may not be necessary.
    - Expand the time allocation of an existing course and merge the learning outcomes of Introduction to Technology and/or Home and Career Skills with those of the existing course.

- Home and Career Skills should be developed and taught in close cooperation with the school's guidance program. Counselors may participate in the actual instruction offered in Home and

Career Skills. Since counselors are certified or licensed to serve at all grade levels, they may function appropriately in grade 6.

- The State Education Department will provide State syllabi and recommendations for facilities and equipment considered necessary to provide adequate instruction in Introduction to Technology and Home and Career Skills. These materials will be provided, on request, to nonpublic schools as well as public schools.

- The delivery of instruction in both Home and Career Skills and Introduction to Technology should be through hands-on activities.

- In public schools, the Introduction to Technology course should be taught in a laboratory, equipped with tools, machines, and devices used in the home and the workplace. Instruction should be accomplished through hands-on, laboratory-based technology learning activities which directly address the concepts and performance objectives set forth in the syllabus.

Regulation

CR 100.4(b) **Initiation of certain instruction in grade six.**

* * * * *

(4) The unit of study requirements for technology education and/or home and career skills included in paragraph (2) of this subdivision may be initiated in grade six, provided that in public schools such subjects shall be taught by teachers certified in those areas.

Policy

- Middle schools organized in a grade 6-8 or 5-8 configuration, which have received the State Education Department's approval as an experimental school may continue to assign teachers to any grade level in the school regardless of certification, as approved by the Division of Teacher Certification.

- Introduction to Technology and Home and Career Skills study may be spread over a 3-year period in grades 6-8, providing that the unit of study requirements are met.

Regulation

CR 100.4(c) **Grade eight acceleration.**

* * * * *

(1) Public school students in grade eight shall have the opportunity to take high school courses in Regents mathematics and in at least one of the following areas: English, social studies, second languages, art, music, occupational education subjects, Regents science courses. Such opportunity would be provided subject to the following conditions:

(i) The superintendent, or his or her designee, shall determine whether a student has demonstrated readiness in each subject in which he or she is to begin high school courses in the eighth grade leading to a local or Regents diploma.

(ii) A student shall be awarded high school credit for such courses only if such student passes one of the following:

(a) for credit towards a Regents diploma, a Regents examination, or an occupational education proficiency examination, or, if no such examinations are available, a

locally developed examination which establishes student performance at a high school level as determined by the principal; or

(b) for credit toward a local diploma, a locally developed examination which establishes student performance at a high school level as determined by the principal or, for an occupational education subject, the appropriate occupational education proficiency examination, when available.

(2) Courses taken pursuant to this subdivision may be substituted for the appropriate requirements set forth in subdivision (b) of this section.

Policy

- A superintendent, or his or her designee, may limit the number of high school courses in which a student may accelerate depending on the student's overall readiness.
- If a student accelerates in occupational education, the course can not be substituted for Introduction to Technology or Home and Career Skills. Introduction to Occupations is recommended for grade 8 acceleration in occupational education.
- A school does not meet its obligation to provide grade 8 acceleration if it offers students the opportunity to take a high school course during the summer between the eighth and ninth grades. The school must offer students an opportunity to accelerate during the school year, and during the regular school week and the regular school day.

Guidelines

The following criteria should be used by school personnel in determining whether a student should be allowed accelerated enrollment in occupational education. These criteria should be used as indicators of whether the individual's needs, potential, and readiness will allow successful early entry into a program of preparation for an occupation. It is not necessary that each indicator be positive, but only that application of the criteria as a group returns an aggregate positive indication of the student's readiness for occupational education.

- The student indicates directly, or through application of assessment instruments, that a tentative decision for occupational education is made.
- The student evidences a maturity level and emotional stability which indicate probable success in an accelerated schedule.
- The student has above average achievement of the skills in the Introduction to Technology and Home and Career Skills programs.
- The student has a satisfactory level of achievement in other educational areas.

DIPLOMA REQUIREMENTS

Regulation

CR 100.5(b) Additional requirements for the Regents diploma.

(2) In order to obtain a Regents diploma, students first entering grade nine in 1985 and thereafter shall successfully complete:

(i) either:

(a) a sequence of three units of credit in each of two occupational education subjects, or in each of two second languages, or in each of two of the following areas: mathematics, science, a second language, occupational education, art or music, provided that, for students first entering grade nine in 1988 and thereafter, three-unit sequences in each of two occupational education subjects may not be used to meet the requirements of this clause, and each three-unit sequence in occupational education shall meet the requirements of section 100.2(h)(3) of this Part; or

(b) a sequence of three units of credit in mathematics, science, a second language, an occupational education subject, art or music, and a sequence of five units of credit in either English or social studies, provided that, for students first entering grade nine in 1988 and thereafter, such three-unit sequence in occupational education meets the requirements of section 100.2(h)(3) of this Part; or

(c) a sequence of five units of credit in mathematics, science, a second language, an occupational education subject, art or music, provided that a student selecting a sequence of five units of credit in a second language may use such sequence to meet the requirements set forth in subparagraph (ii) of this paragraph, and further provided that, for students first entering grade nine in 1988 and thereafter, such sequences of five units of credit in an occupational education subject shall meet the requirements of section 100.2(h)(4) of this Part; and

(ii) a sequence of three units of credit in a second language, except that:

(a) for students first entering grade nine in 1985, 1986, 1987, 1988, or 1989, who take a sequence of not less than five units of credit in occupational education subjects, art or music, the three-unit sequence required by this subparagraph may be in a second language or in any other subject area; and

* * * * *

CR 100.5(c) **Additional requirements for the local diploma.**

* * * * *

(2) In order to obtain a local diploma, students first entering grade nine in 1985 and thereafter, shall successfully complete:

(i) a sequence of three units of credit in each of two occupational education subjects, or in each of two second languages, or in each of two of the following areas: mathematics, science, a second language, occupational education, art or music, provided that, for students first entering grade nine in 1988 and thereafter, three-unit sequences in each of two occupational education subjects may not be used to meet the requirements of this clause, and each three-unit sequence in occupational education shall meet the requirements of section 100.2(h)(3) of this Part; or

(ii) a sequence of three units of credit in mathematics, science, a second language, an occupational education subject, art or music, and a sequence of five units of credit in either English or social studies, provided that, for students first entering grade nine in 1988 and thereafter, each three-unit sequence in occupational education shall meet the requirements of section 100.2(h)(3) of this Part; or

(iii) a sequence of five units of credit in mathematics, science, a second language, an occupational education subject, art or music, provided that, for students first entering grade nine in 1988 and thereafter, such a sequence of five units of credit in an occupational education subject shall meet the requirements of section 100.2(h)(4) of this Part.

* * * * *

(4) Units of credit received by a student pursuant to paragraph (2) of this subdivision shall be included in the 18 1/2 units of credit required pursuant to paragraph (a) (2) of this section, provided that a sequence in occupational education may be applied toward a local diploma if such sequence has been approved by the department.

(5) In order to obtain a local diploma, students first entering grade nine in 1987 and thereafter, and taking an approved occupational education sequence, shall pass the appropriate occupational education proficiency examinations, where available, as defined in section 100.1(k) of this Part.

Guidelines

- All students completing a sequence for either the local or Regents diploma, must complete State-approved sequences. The class of 1989 must meet time requirements of the new sequences and the class of 1990 must meet content requirements. State occupational education proficiency examinations will be available for the class of 1992. Students in the class of 1992 and thereafter, pursuing a sequence of occupational education, must take and pass the appropriate State proficiency examinations.

An overview of all new occupational education sequences, and descriptions of these sequences, are included in Section III of this Handbook. The Introduction to Technology and Home and Career Skills courses, normally offered in grades 7 and 8, serve as a foundation for all occupational education courses.

Regulation

CR 100.5(d) Alternatives to specific Regents and local diploma requirements.

(1) A student may earn a maximum of 6 1/2 units of credit for either a Regents or local diploma without completing units of study for such units of credit if:

(i) based on the student's past academic performance, the superintendent of a school district or the chief administrative officer of a nonpublic school, or his or her designee, determines that the student will benefit academically by exercising this alternative;

(ii) the student achieves a score of at least 85 percent, or its equivalent as determined by the commissioner, on a State-developed or State-approved examination;

(iii) the student passes an oral examination or successfully completes a special project to demonstrate proficiency, as determined by the principal, in the subject matter area; and

(iv) the student attends school, or received substantially equivalent instruction elsewhere, in accordance with section 3204(2) of the Education Law, until the age of 16 pursuant to sections 3204 and 3205 of the Education Law.

Policy

- The following are State-developed examinations: Regents examinations in all subjects, second language proficiency tests, and occupational education proficiency tests.

- If a student wishes to earn units of credit toward the local diploma without fulfilling the required units of study, the examination for that course must be State-developed or have State Education Department approval prior to the administration of the examination. Locally developed occupational education examinations must be submitted to the Division of Occupational Education Instruction.

- Each occupational education proficiency examination will identify the units of study which the examination tests. Credit-by-examination, in conformance to Commissioner's Regulations 100.5(d), will be awarded for those units of study tested, not for the entire sequence.

- The oral examination may not be a repeat of the written examination, but must test areas not included in the written examination. The oral examination may be administered before or after the final written examination is given.

- As part of a student's special project under the provisions of section 100.5(d)(1), a student must demonstrate proficiency in the necessary laboratory skills. The Department will develop specific guidelines in this area.

Guidelines

- The student's academic record must be reviewed to ensure that in the majority of courses completed, the student has received above average final examination and course grades, especially in the subject area for which credit-by-examination is being sought.

- Results of appropriate occupational aptitude tests should be considered when occupational education students seek such credit.

- A community project, as part of student leadership activities, is an example of a special project which might be required of occupational education students.

Regulation

CR 100.8 **Local high school equivalency diploma.**

Boards of Education specified by the commissioner may award a local high school equivalency diploma based upon experimental programs approved by the commissioner.

Policy

- The high school equivalency diploma is granted by the State Education Department, not by the school or BOCES which conducts the program.

Guidelines

- High schools that conduct high school equivalency preparation programs or alternative high school equivalency preparation programs may not award units of credit for passing the subtests on the GED. Students may take other courses concurrently in general or occupational education subjects,

and may receive units of credit for passing these courses. If a student receives a high school equivalency diploma while enrolled in secondary courses, the student may complete those courses.

OCCUPATIONALLY RELATED MATHEMATICS/SCIENCE

Regulation

CR 100.5(d)(3) Occupationally related mathematics and science.

(i) Regents diploma. Students first entering grade nine in 1984 and thereafter may use one credit earned in an occupationally related science or mathematics course, a Regents science or a Regents mathematics course, both towards meeting the science or mathematics requirement for a Regents diploma and towards an approved sequence in occupational education, only if such courses are approved by the commissioner for such purpose. For occupationally related science and mathematics courses, such approval shall be granted only upon submission of evidence that such courses are equivalent to Regents courses in science and mathematics. However, the unit of credit earned for such courses shall count as only one unit of credit towards the 18 1/2 units of credit required for a Regents diploma.

(ii) Local diploma. Students first entering grade nine in 1984 and thereafter may use one unit of credit earned in an occupationally related mathematics course or the business mathematics course, and/or one unit of credit earned in the occupationally related science course towards meeting the mathematics and/or science requirements or sequence requirements in mathematics or science for a local diploma, provided that such courses shall be taught in accordance with the appropriate State-developed or State-approved syllabi.

Course Descriptions

- Occupationally Related Mathematics is a second-year mathematics course for students pursuing a local diploma who are pursuing an occupational education sequence or have a career goal which this course will help them attain. The course provides instruction in the use of mathematical procedures in problem solving, decision making, and day-to-day operations within a cross section of the various occupational areas. A State syllabus describes the educational results expected and provides examples of how the several areas of mathematics are applied to a variety of employment tasks.

- Occupationally Related Science is a second year science course for students pursuing a local diploma who are pursuing an occupational education sequence or have a career goal which this course will help them attain. The principles of several sciences are presented in the context of practical applications within the world of work. A State syllabus describes these principles, and several applications of each, as well as the education results required of this course.

- Business Mathematics is a 1-unit course designed to develop the specific skills required to solve a wide variety of mathematical problems commonly found in every day business situations. Successful completion of Business Mathematics, within presented guidelines, will provide one unit of credit, which may be used as one of the two units of mathematics required for a local diploma or as one unit of a 3-unit local mathematics sequence.

Policy

- Schools wishing to provide to Regents diploma candidates an Occupationally Related Mathematics or Science course that will be applicable to that diploma, must submit a course outline, containing Performance Objectives and Instructional Strategies, to the Bureau of Occupational Education Program Development for approval by the staffs of Occupational Education and Mathematics or Science Education. A proposed final examination of Regents level rigor must also be submitted to the Bureau of Occupational Education Program Development, for approval by the staffs of Occupational Education and Mathematics or Science.

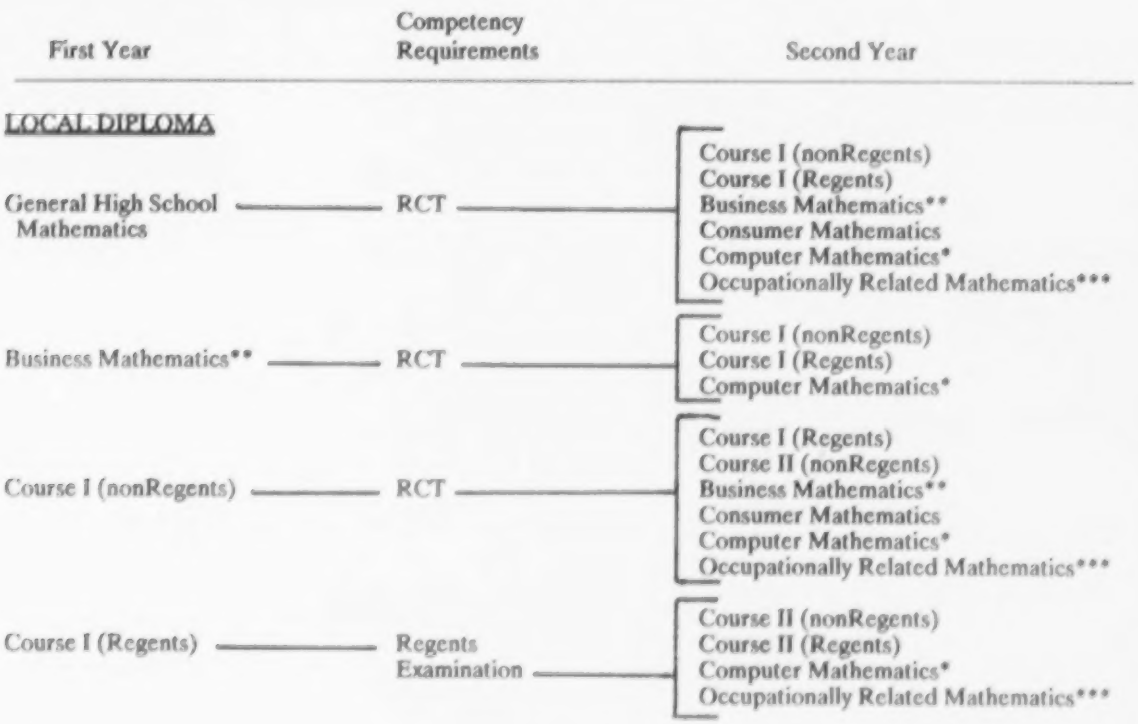
- Occupationally Related Mathematics or Occupationally Related Science may be used as one of the three units in a mathematics/science sequence toward a local diploma.

- The content of Occupationally Related Mathematics and Occupationally Related Science may be incorporated into the occupational education specialization courses if the study time of those courses is increased by the appropriate one or two units of study. Expansion of study time is not required when mathematics and/or science content is an inherent part of the specialization course, and covered by the credit granted for that course.

- Credit for completion of Occupationally Related Mathematics and/or Occupationally Related Science may be used as part of the credit required for an occupational education sequence only in those sequences which list the(se) course(s) as component parts of the sequence.

MATHEMATICS -- TWO-YEAR REQUIREMENT

Shown are typical course selections for students entering grade nine in 1985 and thereafter, to meet the two-year mathematics diploma requirement.



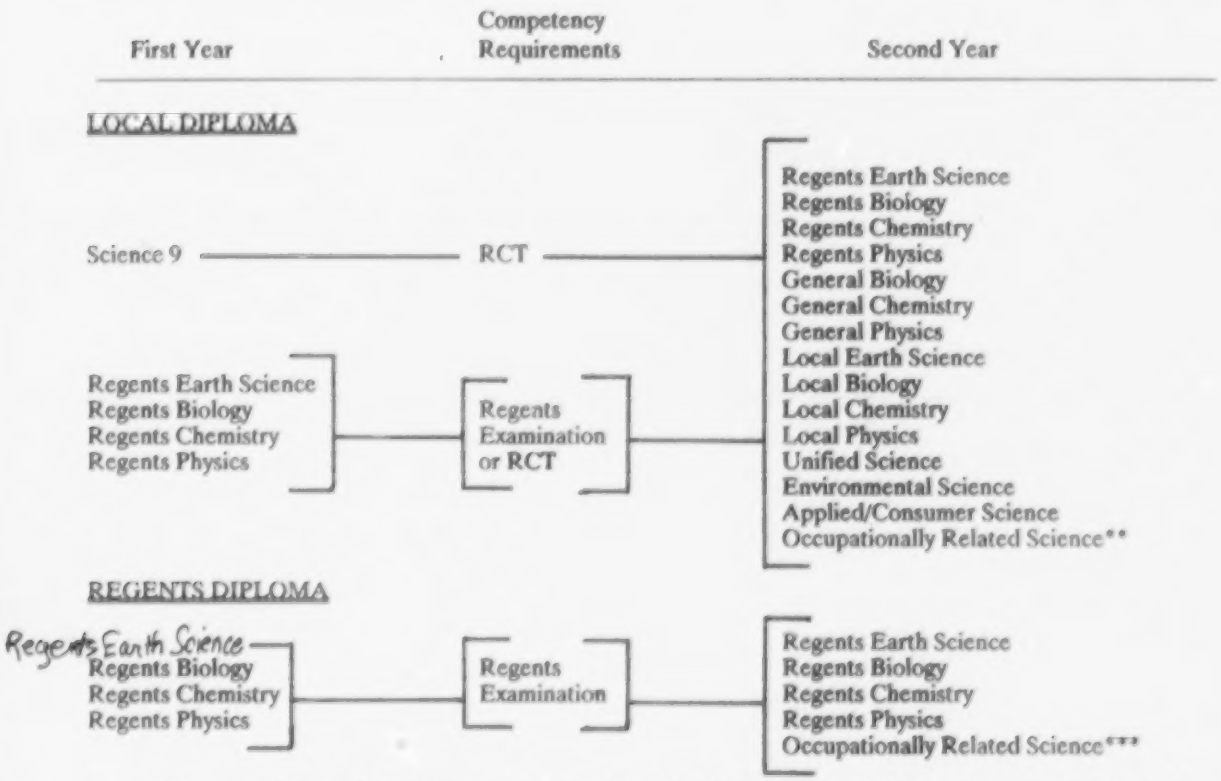
* Must be State-approved.

** Either Business Mathematics or Occupationally Related Mathematics, but not both, may be part of the 3-unit mathematics sequence for the local diploma.

*** Occupationally Related Mathematics courses, developed locally, which are equal in difficulty to Regents mathematics courses, may be submitted to the Department for Regents credit approval. These courses may not be used as part of the Regents mathematics sequences.

SCIENCE -- TWO-YEAR REQUIREMENT

Shown are typical course selections for students entering grade nine in 1985 and thereafter to meet the two-year science diploma requirement. Competency requirement -- RCT or Regents examination -- will commence with students first entering grade nine in 1987.



* The second year of study must not substantially duplicate the same field of science covered in the first year (i.e., Regents biology and local biology; Regents chemistry and general chemistry).

** Occupationally Related science courses have been developed. These courses are directly related to the students' occupational fields and may be either separate courses or integrated into the occupational specialization subjects. One unit of Occupationally Related Science may be used towards a three-unit sequence in science for a local diploma only.

*** Occupationally Related Science courses developed at the local level, which are equal in academic difficulty to the Regents science courses, may be submitted to SED for Regents credit approval. These courses may not be used as part of the Regents science sequence.

OCCUPATIONAL EDUCATION FOR GENERAL EDUCATION CREDIT

For the Local Diploma

Students pursuing an approved sequence in occupational education have the option of using specified occupational education courses to meet certain diploma requirements in general education.

State syllabuses in occupational education courses related to general education are designed to meet criteria established for the granting of local diploma credit in specified general education areas. These State syllabuses, listed below, can be used at the discretion of the superintendent of schools for courses which will satisfy local diploma requirements in general education.

General Education Requirements	Permissible Occupational Education Substitution	Available For All Local Diploma Candidates	Available For All Regents Diploma Candidates
Second unit of mathematics***	State-developed Occupational Mathematics	Yes - If related to the student's occupational goal*	No
	State-developed Business Mathematics	Yes - Unless the student has successfully completed Course I Regents Mathematics	No
	Locally developed State-approved Occupational Mathematics	Yes - If related to the student's occupational goal*	Yes
Second unit of science***	State-developed Occupational Science	Yes - if related to the student's occupational goal*	No
	Locally developed State-approved Occupational Science	Yes - if related to the student's occupational goal*	Yes - if related to students occupational goal*
Art**	Design and Drawing for Production	Yes	Yes

* Occupational goals should be identified by 1) students pursuing an occupational education sequence or 2) nonoccupational education students for whom the course is compatible with their career goals.

** "Design and Drawing for Production," a course jointly developed by the Department's Bureau of Art, Music, and Humanities Education and Bureau of Home Economics and Technology Education Programs, may be applied towards either a Regents or local diploma.

*** The phrase "second unit" in this chart means one of two, not the later unit in sequential order.

General Education Requirement***	Permissible Occupational Education Substitution	Available to Local Diploma Students Pursuing An Occupational Education Sequence	Available to Regents Diploma Students Pursuing An Occupational Education Sequence
4th or 5th unit of English	State-developed Business Communications	Yes	Yes
	Locally developed State-approved Technical Writing	Yes	Yes
4th unit of Social Studies****	Student Leadership Organization Activities	Yes	Yes
5th unit of Social Studies	Business Law	Yes	Yes
Health	Health Occupations Core	Yes	Yes
Art	Technical Drawing	Yes	Yes
	Architectural Drawing	Yes	Yes
	Clothing and Textiles Core	Yes	Yes
	Housing and Environment Core	Yes	Yes
	Architectural Technology	Yes	Yes
	Drafting	Yes	Yes
	Graphic Communications	Yes	Yes
	Graphics, Printing and Visual Communications	Yes	Yes
	Fashion Design Technology	Yes	Yes

*** Units of the Office of General and Occupational Education will be working together on subsequent revisions of the courses listed in this section so that some may be used by all secondary school students when taught by teachers whose qualifications meet identified standards in both areas.

**** A program of Student Leadership Activities which conforms to State guidelines may be used to satisfy the requirement of 1/2-unit of Participation in Government.

Questions regarding authorization to use credit for occupational education courses to meet general education requirements should be directed to:

Dr. Willard R. Daggett, Director
Division of Occupational Education Instruction
One Commerce Plaza, Room 1623
Albany, New York 12234
(518) 474-2451

For the Regents Diploma

All general and occupational education courses elected by students enrolled in an occupational education sequence leading to a Regents diploma must meet the specific criteria which follows before a course may be used for credit toward a Regents diploma.

> Regents credit in mathematics may be awarded only for the Regents level mathematics courses I, II, and III. Regents science credit may be awarded for Regents courses in Earth Science, Biology, Physics, or Chemistry, or local districts may develop an occupational education related science course of similar rigor and submit it to the State Education Department for approval to offer for Regents science credit. The State-developed Occupationally Related Science course may not be used as part of a Regents science sequence.

The State-developed occupational education courses listed For the Local Diploma, when available, can be used to satisfy Regents general education requirements as shown above, with the exception of mathematics and science.

All locally developed general education and occupational education courses designed to satisfy requirements for a Regents diploma must be submitted to, and approved by, the State Education Department. Criteria for approval of occupational education courses for general education credit are listed in the appendix. Questions regarding authorization to use occupational education courses to meet general education requirements should be directed to:

Director
Division for Program Development
Room 212, State Education Building
Albany, New York 12234
(518) 474-5897

STATE TESTS

Regulation

CR 100.1(k) Definitions.

Occupational education proficiency examinations means State tests taken by students pursuing approved sequences in occupational education subjects.

CR 100.5(b)(5) Additional requirements for the Regents diploma.

> In order to obtain a Regents diploma, a student shall pass the required Regents examinations as follows:

(iii) For students first entering grade nine in 1987 and thereafter:

(b) occupational education proficiency examinations as defined in section 100.1(k) of this Part, for any occupational education sequence for which such tests are available.

CR 100.5(e)(5) Additional requirements for the local diploma.

In order to obtain a local diploma, students first entering grade nine in 1987 and thereafter, and taking an approved occupational education sequence, shall pass the appropriate occupational education proficiency examinations, where available, as defined in section 100.1(k) of this Part.

Policy

- When available, State proficiency examinations will be administered to students of each occupational education program, for both Regents and local diplomas, beginning with the graduating class of 1991.
- Examination results will be part of the Comprehensive Assessment Report (CAR) required to be submitted annually to local boards of education by their superintendents of schools.
- Students first entering grade nine in 1988, who are pursuing an occupational education sequence, will be the first graduating class required to pass available occupational education proficiency examinations, in the occupational education sequence. This requirement includes successful completion of the State examination in the two required modules of Introduction to Occupations.

Regulation

CR 100.2(f) Use of alternative examinations

With the approval of the commissioner, tests which measure an equivalent level of knowledge and skill may be substituted for the tests specified in this Part. At least six months prior to the administration of such tests, the proposed test booklet, answer sheet, scoring key, directions, and all other auxiliary materials shall be provided to the commissioner for approval, and shall be accompanied by such empirical evidence of the reliability of the test scores and of the comparability of the proposed test to the corresponding State test with respect to content and difficulty, as is available.

Policy

- Schools are expected to use the State-mandated tests unless there are convincing reasons for not doing so. Requests to use alternative examinations must be fully justified.

Procedure

- A request to substitute tests for the occupational education proficiency tests specified in this Part of Commissioner's Regulations, together with all materials specified in CR 100.2(f) and a description and documentation of the procedure used to establish a pass mark or State reference

point equivalent to that of the corresponding State test, should be forwarded at least six months in advance of the date of administering such tests to:

Division of Educational Testing
The State Education Department
Room 771 EBA
Albany, NY 12234
(518) 474-5902

EVALUATION OF OCCUPATIONAL EDUCATION PROGRAMS

To meet the goal of providing excellent occupational education programs, it is necessary to periodically determine the extent to which these programs are meeting their objectives. The State has developed the Occupational Education Data System to enable school districts and BOCES to gather follow-up data indicating what happened to occupational education students after they completed an occupational sequence. These data assist the agency in determining the effects of the occupational education program on students who were enrolled in it. In addition to this measure of effectiveness, the State Education Department is developing State occupational education proficiency tests that will be required of every student taking an occupational education sequence. These data will indicate the extent to which students are attaining the major objectives of an occupational education program. These test results will enable the agency to gauge how effective the instructional program has been in imparting the knowledge and skills found in the State curriculum.

While the measures described above help an agency judge the overall effectiveness of a program, they do not help the agency to know what aspects of a program need to be improved. To obtain information of this kind it is necessary to gather data concerning the quality of program activities. Data indicating which aspects of a program could be improved, and how they might be improved, make it possible for the agency to begin the process of taking corrective action. Through the evaluation of a program's outcomes and the program activities leading to those outcomes, needs are identified. The needs serve as the foundation for local program planning.

To support an agency's evaluation of the effectiveness of its programs and the quality of program activities, the Department has developed the Statewide Occupational Education Evaluation System. In addition, the Bureau has developed an evaluation procedure to be used in examining the Introduction to Occupations course. The Bureau assists agencies in the use of these evaluations. For further information or assistance, call or write:

Bureau of Occupational Education Policy Development and Grants Administration
The State Education Department
One Commerce Plaza, Room 1624
Albany, New York 12234
(518) 474-1081

LOCAL PROGRAM PLANNING

Local program planning is the basis for revision and improvement of local occupational education programs. While local occupational education plans are required of major secondary providers of occupational education by State and Federal legislation, they provide an agency an opportunity to analyze the needs of the agency and specify the particular strategies which will be applied to address the needs. The local plan combines various required reports and indicators of future program directions. The reports included are the summary of evaluation activities, recommendations of the local advisory council, the sex equity action plan, and the annual program report on progress which has been made on the planned activities of the prior year.

The heart of the plan is based upon analysis of the reports which focus on specific needs of the agency. Other analyses may review labor market demand, student interests, demographic changes, and other variables. Based on these factors, a composite set of needs is identified, including those related to equity issues. The plan

Based on these factors, a composite set of needs is identified, including those related to equity issues. The plan then suggests various strategies which the agency will use to meet the needs. The strategies are developed within the various human resource, fiscal, and other constraints. Priorities are indicated to reflect the relative importance of the needs and the ranking for use of various resources.

At the local level, the occupational education plan serves as a public statement of the future direction of programs of the agency. This helps the public, local policymakers, and other institutions to understand the priorities of the agency and provide support. The plan is a blueprint for linking various State and Federal resources, e.g., JTPA, AEA, and ORRA, within a common framework. It also reflects the ways in which the local agency will respond to external initiatives, e.g., the Regents Action Plan, the Comprehensive Assessment Report, and statewide priorities in occupational education. Finally, it serves as a working agenda of priority activities between the agency and other local and State agencies.

For further information contact:

Office of General and Occupational Education
Bureau of Occupational Education Policy Development and Information
The State Education Department
One Commerce Plaza, Room 1624
Albany, NY 12234
(518) 474-3981

STATE-APPROVED PROGRAMS

Local programs which conform to State syllabuses, meet or exceed State-recommended minimums for facilities and equipment, and provide instruction through appropriately certificated teachers, are considered to be State-approved programs.

Local education agencies which have good reason to offer locally developed curriculum in lieu of State curriculum may still be considered to be offering a State-approved program if the locally developed program meets specific State criteria.

State criteria to be applied to such locally developed programs, are presented in the Appendix of this Handbook.

SECTION III

OCCUPATIONAL EDUCATION SEQUENCES AND PROGRAMS

Policy

In meeting on April 14, 1989 the Board of Regents of the State of New York, adopted as policy that:

"All recipients of a local or Regents diploma shall be prepared for immediate employment and/or postsecondary education."

As of the date of publication of this Handbook, appropriate units of the Department are consulting with educators in the field, representatives of business/industry and labor, and other concerned segments of society to develop programs and procedures which should effect this policy.

Regulation

CR 100.2(h) Availability of occupational education.

(1) All public school districts shall offer students the opportunity to begin an approved occupational education sequence in ninth grade. Only those occupational education sequences which have been approved by the commissioner may be used to fulfill the requirements for a Regents or local diploma set forth in section 100.5 of this Part.

(2) For students entering grade nine in 1985 and thereafter, each approved occupational education sequence shall include a minimum of one credit in introduction to occupations, such instruction to be offered at any point in the sequence.

(3) For students first entering grade nine in 1988 and there-after, approved sequences of three units of credit in an occupational subject shall be so organized that they may be extended into approved sequences of five units of credit or more without loss of credit.

(4) For students first entering grade nine in 1988 and there-after, approved sequences of five units of credit or more in occupational education shall be employment preparation sequences satisfactory to the commissioner.

Regulation

Ed. L. 4602 Occupational education.

1. The board of education of each school district shall provide secondary school pupils and adults access to programs of occupational education, commensurate with the interests and capabilities of those desiring and having a need for preparatory training, retraining or upgrading of employment, and develop realistic programs in accord with manpower needs in existing and emerging occupations for present and projected employment opportunities.

2. Occupational education programs and classes shall be organized and conducted by boards of education or arranged through shared services as provided by boards of cooperative educational services, in accordance with the rules of the regents and the regulations of the commissioner of education.

3. Programs may include pre-vocational activities, occupational classes, apprentice related instruction, cooperative education, work experience, continuing adult occupational education and other effective means of preparing and upgrading employment capabilities. Classes for out-of-school youth sixteen years of age and over and for adults may be conducted during the day and/or evening.

4. The board of education of each school district maintaining programs in occupational education, practical arts, vocational and educational guidance, or continuing occupational education for adults has full power and authority:

   a. To employ properly certified directors, supervisors, principals, teachers and counselors and assign them to serve in the schools and classes authorized by this article.

   b. To establish approved courses of study.

   c. To purchase or acquire sites and grounds; to purchase, acquire, lease or construct and to repair suitable shops and buildings or to arrange for shared services.

   d. To purchase necessary machinery, tools, apparatus, books and supplies.

5. School days spent in legal employment by pupils enrolled in approved occupational cooperative education programs who are in part-time school attendance shall be included in the average daily attendance for apportionment of state aid under provisions of section thirty-six hundred two of this chapter.

Policy

- All students must have the opportunity to continue, beginning in grade 9, the occupational education begun in the mandated study of Home and Career Skills and Introduction to Technology, by electing an occupational education sequence. Schools may not restrict occupational education to later secondary grades.

Regulation

CR 100.2(w) Credit for BOCES Programs.

(1) Each board of cooperative educational services (BOCES) shall determine the number of units of credit that will be earned by students successfully completing units of study in each of the instructional programs of the BOCES. The number of units of credit that may be earned for each program shall be determined after consultation with boards of education of the component school districts.

(2) In awarding credit toward a Regents or a local high school diploma, boards of education shall award to students who have successfully completed a BOCES program, the number of units of credit determined by the BOCES pursuant to paragraph (1) of this subdivision.

Policy

- The State sequences of occupational education have been developed on the basis of the number of units of study, as such units of study are defined by Commissioner's Regulation 100.1(a), considered to be necessary for mastery of the learning outcomes to be achieved.

- It is, therefore, a policy of the State Education Department that a student who has mastered the learning outcomes of an approved occupational education program requiring 3- or 4-units of study has acquired a 3-unit sequence, and a student who has mastered the outcomes of a program requiring five or more units of study has acquired a 5-unit sequence toward satisfaction of diploma requirements.

- These provisions do not preclude the earning of units of credit under the "testing out" provisions of Commissioner's Regulation 100.1(b)(2).

Introduction To Occupations Component

The Introduction to Occupations curriculum is comprised of twenty-six 1/4-unit modules, of which two modules are required study. Each student electing a sequence of occupational education must acquire 1/4-unit of credit in each of The Working Citizen and Personal Resource Management modules. The remaining 1/2-unit of credit is obtained from among the 24 optional modules. The curriculum may be taught as two one-half year courses or as one full-year course, or the content may be integrated into the occupational education specialization program. If integrated, the time requirement for study of Introduction to Occupations must be added to the time requirement of the specialization program.

The elective modules which complete the 1-unit requirement, should be chosen on the basis of the individual student's goals, interests, and abilities. Although all approved occupational education sequences require the equivalent of at least one unit of Introduction to Occupations, the student who completes two sequences of occupational education can use a single unit of Introduction to Occupations to satisfy that requirement in both sequences. Such dual use will, however, generate only one unit of credit toward graduation requirements. Effective with the class of 1992, no more than one 3-unit sequence of occupational education may be applied toward fulfillment of sequence requirements for diploma.

OCCUPATIONAL EDUCATION INSTRUCTIONAL PROGRAM AREAS (Disciplines)

Agricultural Education

Secondary school Agricultural Education programs are composed of three essential components: classroom instruction, supervised work experience, and student leadership development activities. Each contributes to a successful program.

Agricultural Education in secondary schools has three major purposes:

to provide the agricultural knowledge and understanding necessary to intelligent functioning as consumers, home owners, and citizens;

to provide exploration of, and introduction to, agricultural careers to those students searching for their career area; and

to provide occupational education to those who have decided on a career in agriculture.

The Agricultural Education instructional area consists of two programs which may not be used as occupational education sequences in satisfaction of diploma requirements, and three program sequences which can be.

Programs which may not be used as sequences are:

Agricultural Awareness

A student enrolled in the Agricultural Awareness program will develop an awareness of the scope and importance of the agriculture industry, through study of basic principles and concepts of agriculture, career opportunities, and the necessary personal development.

Self-fulfillment Through Agriculture

A student enrolled in the Self-fulfillment Through Agriculture program will acquire the abilities to produce, care for, and manage plants, animals, and natural resources, for reasons of personal development and satisfaction.

Programs which are Occupational Education sequences are described on page 31.

Students intending to apply an Agricultural Education sequence toward a local or Regents diploma must complete a minimum of four units in a State or State-approved sequence. The sequence should include an area of study emphasis selected from within one of the three Agricultural Education program clusters. The four units must include all required units and an approved combination of alternative units. An extended sequence of five or more units is an option of each program cluster.

The Agricultural Education program cluster(s) and area(s) of study emphasis which a school will offer are to be determined by the Agricultural Education faculty, in conference with the Agricultural Education program consultant committee and the school's administrators.

An Agricultural Education sequence may include a maximum of 1/2-unit of credit for approved advanced student leadership development activities in the National FFA Organization Program. Such approved activities must be beyond the FFA instruction and activities integrated in the school day during the school year, and all objectives of the Advanced Student Leadership in Agriculture Standard of Instruction module must be met.

One unit of a 4-unit or 5-unit sequence may be acquired through an approved Cooperative Work Experience Program in Agriculture, conforming to the Supervised Occupational Experience Standard of Instruction module. Cooperative Work Experience in Agriculture is a supervised, regularly scheduled, paid, part-time work experience, planned cooperatively by the student, employer, and agriculture teacher or cooperative education coordinator. A reference, "Cooperative Agricultural Education Teacher/Coordinator Handbook," is available on request to the Bureau of Agriculture, Trade, and Technical Programs.

Students pursuing a sequence of Agricultural Education may earn one unit of credit toward satisfying the second unit of science requirement for the local diploma, by successfully completing one unit of Occupationally Related Science, either as a discrete course or infused in the Agriculture Education program.

Further information on Agriculture Education may be obtained from the:

Bureau of Agriculture, Trade, and Technical Education
One Commerce Plaza, Room 1621
Albany, New York 12234
(518) 474-4802

Business/Marketing Education

Business/Marketing Education is a broad and diverse discipline that enables students to prepare for entry-level employment in the business office and marketing occupations, and/or for postsecondary education. The sequences of courses of Business/Marketing Education are designed to provide a variety of options for students to meet sequence requirements while developing broad-based, transferable skills and specialized competencies. The school store laboratory and the student leadership development programs of Future

Business Leaders of America and Distributive Education Clubs of America should be integral parts of a Business/Marketing Education program.

Further information on Business/Marketing Education may be obtained from the:
Bureau of Business and Health Occupations Programs
One Commerce Plaza, Room 1621
Albany, New York 12234
(518) 474-6240

Health Occupations Education

Programs of Health Occupations Education prepare students for employment in the health care industry, either immediately following secondary school graduation or after continued study at a postsecondary institution.

Curricula and instructional strategies of Health Occupations Education are competency-based, and are designed to help each student develop proficiency in performance of the specific skills required in the chosen occupational area. There are no academic course prerequisites to entry into any Health Occupations Education program offering. Prior or concurrent study in fields related to the performance of health care personnel, such as chemistry, biology, mathematics, and keyboarding is, however, desirable. Supervised clinical experience is an integral part of every Health Occupations Education program, through scheduled assignments, under supervision, at health care facilities.

A 2-unit Core allows students to explore the knowledge, skills, and attitudes needed for a career in health care, and for related postsecondary education. Emphasis is on the development of basic skills common to all health careers, thus serving as the foundation of the sequences of five or more units which prepare students for entry into specific health career specializations.

Further information on Health Occupations Education may be obtained from the:
Bureau of Business and Health Occupations Programs
One Commerce Plaza, Room 1621
Albany, New York 12234
(518) 474-6240

Home Economics Education

The Home Economics Education program in grades 9-12 includes sequences of three units and of five or more units, developed around three clusters of content: Human Services and Family Studies Occupations Cluster, Food and Nutrition Occupations Cluster, and Textiles and Design Occupations Cluster. Each cluster focuses on one or more job concentration areas.

Students electing a Home Economics Education sequence should complete the Core course(s) in the cluster before beginning the advanced courses. Those students pursuing a 3-unit sequence in the Home and Personal Management Cluster should complete all four Core courses. The third unit of credit in a 3-unit sequence in all other clusters should be a course which focuses on a sequence specialization. Schools may select from among the State developed courses in each cluster, those additional courses necessary to extend the 3-unit sequence into a sequence of five or more units.

Additional information on the Home Economics program may be obtained from the:
Bureau of Home Economics and Technology Education Programs
One Commerce Plaza, Room 1619
Albany, New York 12234
(518) 474-3954

Technical Education

The Technical Education program at the secondary level, which includes laboratory application experience as well as mathematics and science enrichment, equips students with the practical skills needed for entry-level employment as support technicians in specialized fields, and qualifies graduates for entry into 2- or 4-year postsecondary technological institutions. Many Technical Education programs maintain articulation agreements with 2-year colleges to jointly offer a program of study which consists of a secondary program of three periods per day, five days per week for two school-years followed by a full 2-year college program in the area of technical concentration. Students who elect a sequence of Technical Education should complete four units of mathematics and three units of science at the secondary level.

Out-of-school, subject specific, job-related work can enhance the Technical Education program, but this work experience cannot be substituted for any part of the formal instructional program.

There are no physical restrictors, such as heavy lifting, endurance, or hazardous situations, present in Technical Education. Physically handicapped students are quite easily accommodated in Technical Education programs and subsequent employment, because mental ability is the major criterion of success of a technician or engineer, who must be able to master mathematics, science, logic concepts and principles, and be able to continuously make both theoretical and practical applications.

Additional information on Technical Education may be obtained from the:
Bureau of Agriculture, Trade, and Technical Programs
One Commerce Plaza, Room 1621
Albany, New York 12234
(518) 474-4802

Technology Education

Technology Education is a program of instruction in the resources, and systems of technology, and of technology's impact on the individual and society. Technology Education programs are designed to assist students of all academic levels to discover their technical interests and capabilities, and to provide system based approaches to solving technological problems. "Hands-on, real-world" instructional activities, which incorporate concepts of science, mathematics, social science, and language arts, guide students in the design and construction of technological systems, devices and products such as telecommunications, computer imaging, computer aided design and manufacturing (CAD/CAM), robotics, and bridge and vehicle design.

Students electing a Technology Education program will complete a Core 3-unit sequence which may be extended into a sequence of five or more units by completion of additional Technology Education courses or those of compatible disciplines such as Trade and Industrial Education. Technology Education places no restriction on the use of any of its courses by any student, as electives.

Additional information on Technology Education may be obtained from the:
Bureau of Home Economics and Technology Education Programs
One Commerce Plaza, Room 1619
Albany, New York 12234
(518) 474-3954

Trade and Industrial Education

The curriculum of Trade and Industrial Education (T & I) has been reorganized into ten program clusters which encompass all aspects of T & I. Specific programs have been identified within each program cluster. The programs have been written to contain modules of instruction, topics, and competencies. A matrix for each program cluster, which identifies programs and the modules required for satisfactory completion, is obtainable from the Bureau of Agriculture, Trade, and Technical Programs. Each module contains the skills and knowledge needed, the degree of proficiency (competency) for each, and suggested instruction time (maximum of 30 hours). Time suggested for each module represents the theory instruction and the initial practice by the student. Additional time for satisfactory development of competencies is allocated within the total program time.

Specific content of a module is identified by topic. Topics are a group of related skills and knowledge, and attendant performance objectives. Performance Objectives/Supporting Competencies identify the outcome competencies which shall be acquired as a result of receiving instruction.

Trade and Industrial Education offers a variety of programs designed to prepare students with employability skills as well as meet graduation requirements of Part 100 of Commissioner's Regulations. Many Trade and Industrial Education sequences also prepare students for advanced study in postsecondary institutions.

Students electing a T & I program must, as a minimum, complete a State developed or State approved program of four units of study to be awarded credit for a 3-unit sequence toward diploma. A 5-unit diploma sequence may be obtained through completion of a program of six or more units chosen from one of the ten T & I program clusters which provide instruction in occupational specialization. Two of the ten program clusters prepare students for occupations which require licensing -- by the Federal Aviation Administration, in the case of the aviation mechanics, and by the New York Department of State, in the case of cosmetology. Admission to the licensing examinations requires successful completion of 750 clock-hours of study each for Aircraft Powerplant Mechanic and Airframe Mechanic (or 1150 hours of combined course study) and 1000 clock-hours study for Cosmetologist.

A brochure describing the courses which comprise the ten T & I program clusters, and additional information on Trade and Industrial Education, may be obtained from the:

Bureau of Agriculture, Trade, and Technical Programs
One Commerce Plaza, Room 1621
Albany, New York 12234
(518) 474-4802

Note: Further information on the required Introduction to Occupations component, and the Occupationally Related Mathematics and Occupationally Related Science courses, may be obtained from the:

Bureau of Occupational Education Program Development
One Commerce Plaza, Room 1623
Albany, New York 12234
(518) 474-4806

Further information on the Special Codisciplinary Four-Unit Drafting Sequence may be obtained from the:

Division of Occupational Education Instruction
One Commerce Plaza, Room 1623
Albany, New York 12234
(518) 474-2451

OCCUPATIONAL EDUCATION SEQUENCE REQUIREMENTS

A concentrated effort to assess the future needs of business, industry, and society, and to address the educational expectations necessary to meet those needs, is reflected in the new Occupational Education curriculum of New York State.

Occupational education, as an integral part of the total process of education, is based upon the individual's understanding of the fundamental attitudes, knowledge, and skills necessary for self-fulfillment, and which provide opportunity to enter and compete in the world of work while simultaneously assuming the responsibility to participate meaningfully in a democratic society. In implementing the philosophy, many means may be utilized. These State sequences of occupational education, taught through the various instructional strategies which the schools may adopt as locally most effective, constitute many of those means.

These revised sequence requirements shall be effective for the class of 1993. Local education agencies may, however, implement them sooner.

Three-Unit Sequences

Specific Occupational Education sequences of 3- or 4-units of study may be used in satisfaction of 3-unit sequence requirements for diploma. Such sequences are offered in all Occupational Education instructional program areas (disciplines) except Technical Education. A special codisciplinary program, the "Four Unit Drafting Sequence," offered by both Technology Education and Trade and Industrial Education, will also satisfy this diploma requirement.

To be acceptable as a 3-unit sequence toward diploma, the student's program must conform to the sequence descriptions which follow. Substitution of other courses or modules for those specified is not allowed unless State approval has been obtained in advance. The procedure to be used in applying for State approval is described on page 62 of this handbook.

Agricultural Education – 4 Units
- Introduction to Occupations (1 unit)
- Basic Agricultural Science (1 unit)
- Advanced Agricultural Science (1 unit)

plus 1 unit from among:
- Specialized Agricultural Skills (1/2 unit or 1 unit)
- Cooperative Occupational Education in Agriculture (1/2 unit or 1 unit)
- Advanced Student Leadership Education (1/2 unit)
- Biology (1 unit)
- Occupationally Related Science (1 unit)
- State Approved Courses of Other Occupational Education Disciplines (1 unit)

Business/Marketing Education – 3 Units
- Introduction to Occupations (1 unit)

plus two of the following 1/2 unit courses:
- Keyboarding I/Business Communications I (1/2 unit/1/2 unit)*

or
- Business Analysis/Business Computer Applications (1/2 unit/1/2 unit)*

plus 1 unit from among:
- Keyboarding I/Business Communications I (1/2 unit/1/2 unit)*
- Business Analysis/Business Computer Applications (1/2 unit/1/2 unit)*

*The two components of these courses need not be offered consecutively or as a one-year course.

Keyboarding I, II and III (1/2 unit each)
Business Communications I, II and III (1/2 unit each)
Electronic Information Processing (1 unit)
Accounting (1 unit)
College Accounting (1 unit)
Financial Information Processing (1 unit)
Principles of Marketing (1 unit)
Business Ownership and Marketing (1 unit)
Business Law (1 unit)
Financial Decision Making (1 unit)

Health Occupations Education – 3 units
Introduction to Occupations (1 unit)
Health Occupations Core (2 units)*

*The HOE Core Program consists of 10 modules, all of which must be completed to acquire credit for the program and sequence.

Home Economics Education – 3 units
Introduction to Occupations (1 unit)
plus one of the following clusters (2 units):
Home and Personal Management Cluster
Food and Nutrition Core (1/2 unit)
Human Development Core (1/2 unit)
Clothing and Textiles Core (1/2 unit)
Housing and Environment Core (1/2 unit)
Food and Nutrition Occupations Cluster
Food and Nutrition Core (1/2 unit)
Human Development Core (1/2 unit)
plus specialization course(s) of the Food and Nutrition Cluster (1 unit)
Textiles and Design Cluster
Clothing and Textiles Core (1/2 unit)
Housing and Environment Core (1/2 unit)
plus specialization course(s) of the Textiles and Design Occupations Cluster (1 unit)
Human Services and Family Studies Cluster
Food and Nutrition Core (1/2 unit)
Human Development Core (1/2 unit)
plus specialization course(s) of the Human Services and Family Studies Cluster (1 unit)

Technology Education – 3 units
Introduction to Occupations (1 unit)*
Foundation Courses (Choose two, for 1 unit)
Materials Processing
Energy or Energy/Power***
Graphic/Electronic Processes***
Electricity/Electronics
Technical Drawing, or the first half-unit of Design and Drawing for Production

Systems Courses (Choose one, for 1/2 unit)

- Production
- Communications
- Transportation
- Construction***
- Manufacturing***

NOTE: The Production course is composed of two 1/4 unit modules of Introduction to Occupations whose content concerns manufacturing and construction.

Technology Education Electives (Choose two, for 1 unit)

- Aerospace
- Architectural Drawing
- Audio Electronics
- Creativity and Innovation
- Automation and Robotics***
- Communication Electronics
- Computer Aided Design
- Computer Aided Manufacturing
- Computer Applications
- Computer Graphics
- – Design and Drawing for Production**
- Digital Electronics
- Energy Applications
- Graphic Communications
- History of Technology
- Land Transportation
- Photography
- – Principles of Engineering***
- Production Research and Development
- Residential Structure

And Foundation and Systems Courses not used as such

* The two required 1/4-unit modules, plus the content of two 1/4-unit elective modules, infused in the Foundation and Systems courses, fulfill this requirement.

** This entire 1-unit course may be used to complete the elective portion of this sequence, if the first half was not used as a Foundation course.

*** These courses are under development.

– These courses may be offered for 1/2-unit or 1-unit of credit.

Trade and Industrial Education -- 4 Units

Introduction to Occupations (1 unit)

plus 3 units from an instructional program of one of the following program clusters:

Aviation/Aerospace Maintenance, Mfg., and Repair Occupations

- Airframe/Power Plant General (Transfer)

Construction Industry and Building Maintenance Occupations

- Oil/Gas Burner Installation and Service
- Domestic Refrigeration Installation and Service
- Plumbing Assembler-Installer
- Electrician Helper
- Rough Carpentry
- Finish Carpentry

Block/Brick Masonry
Building Maintenance
Cosmetological Occupations
Manicurist/Pedicurist
Nail Specialist
Cosmetics Salesperson
Hair Care Product Salesperson
Drafting Occupations
Drafting Fundamentals
Introduction to Computer Aided Drafting (CAD)
Electronic/Electromechanical Equipment Occupations
Basic Electricity/Electronics
Laundry Equipment Technician
Small Appliance Technician
Electromechanical Components Technician
Security Systems Technician
Cable and Antenna Systems Technician
Computer Servicing
Graphics, Printing, and Visual Communications Occupations
Product Photography
Interior Design
Offset Lithography/Printing
Motorcycle, Marine, and Outdoor Equipment Maintenance Occupations
Engines Technician
Marine Set-up Technician
Outdoor Power Equipment Set-up Technician (Lawn and Garden)
Motorcycle Technician
Precision Metalwork Occupations
Welder Operator (Oxy Fuel Gas)
Welder Operator (Shielded Metal Arc)
Welder Operator (Gas Metal Arc)
Welder Operator (Gas Tungsten Arc)
Lathe Operator
Grinding Machine Operator
Milling Machine Operator
Sheet Metal Machine Operator
Public and Private Security Occupations
Introduction to Public and Private Security
Introduction to Criminal Justice
Vehicle Maintenance and Repair Occupations
Auto Body Repair Helper
Service Center Helper
Diesel Maintenance Helper
Heavy Equipment Service Helper

Special Codisciplinary Four-Unit Drafting Sequence
Introduction to Occupations (1 unit)
plus either
Design and Drawing for Production * (1 unit)
or
Technical Drawing (1/2 unit)
and
Computer Aided Design (1/2 unit)

plus 1 unit from among**

Architectural Drawing (1/2 unit)
Site Preparation Drafting (1/2 unit)
Project Presentation Drawing (1/2 unit)
Tool and Die Drafting (1/2 unit)
Structural Drafting (1/2 unit)

plus either**

Construction Drafting (1 unit),

or

Manufacturing Drafting (1 unit)

* **When "Design and Drawing for Production" is used as a component of this Four-Unit Drafting Sequence, CAD should be used as an instructional tool.**

** **The two 1/2-unit courses and the 1-unit course selected, should be compatible in occupational content and emphases.**

Five-Unit Sequences

Sequences of five or more units, in satisfaction of requirements for diploma, are offered by the Occupational Education instructional program areas of:

Agricultural Education
Business/Marketing Education
Health Occupations Education
Home Economics Education
Technical Education (6 units minimum)
Technology Education
Trade and Industrial Education (6 units minimum)

and in the

Diversified Cooperative Occupational Education Program.

Five-unit Occupational Education sequences may be discrete sequences of five or more prescribed units of study, may be extended sequences, formed by joining two or more units of State developed or State approved courses to one of the previously identified 3- or 4-unit sequences of Occupational Education. Interdisciplinary sequences are all five units and may be constructed by adding one or two units of one instructional program to three or more sequence units of another instructional program area.

Extended/Interdisciplinary 5-unit Sequences of Occupational Education

Criteria for Selection

The following criteria must govern the selection of courses to be joined to a 3-unit or 4-unit sequence of Occupational Education to form a five or more unit extended or interdisciplinary sequence of Occupational Education for 5-unit sequence diploma credit.

1. Those Occupational Education specialization programs listed herein, or State-approved substitutes, must be used to form extended or interdisciplinary sequences.

2. The extended or interdisciplinary sequence must include one of the listed 3- or 4-unit State sequences, or State-approved sequences, of Occupational Education.

3. The sequence must provide a minimum of five units of credit. Some sequences will require more than five units of study for completion.

4. **Sequences including Cooperative Occupational Education may be of five or six units length, and may contain no more than one unit or two units respectively, of Cooperative Occupational Education.**

5. **Occupationally Related Mathematics or Occupationally Related Science courses may be part of only those subject specific sequences which list them as components.**

6. **Excepting Occupationally Related Mathematics or Science, where specified, the instruction used to create an extended or interdisciplinary sequence must be from the curriculum of a single discipline.**

Extended 5-Unit State Sequences

Students who have completed a 3-unit or 4-unit sequence of Agricultural, Business, Trade and Industrial, Home Economics, or Technology Education may combine that sequence with one or two units of courses or programs listed under any one of the following programs or clusters, to form an extended 5-unit sequence if the combination, in the opinion of the Local Education Agency, satisfies the specified Criteria for Selection.

Core courses of two or more instructional program areas may not be so combined to form a sequence, with the exception of the Business/Marketing Education Core courses, "Keyboarding I/Business Communications I" and "Business Analysis Business Computer Applications," one -- but not both -- of which may be combined with another instructional program area's Core courses.

Course or Program Title

Agricultural Education

Agricultural Production and Science Occupations Cluster
- **Animal Science**
- **Mechanical Science**
- **Plant Science**
- **Business Management**

Agricultural Business Management and Service Occupations Cluster
- **Animal Science**
- **Mechanical Science**
- **Plant Science**
- **Business Management**

Natural Resources and Ecological Occupations Cluster
- **Business Management**
- **Conservation Science**
- **Mechanical Science**
- **Plant Science**

Business/Marketing Education

Information Processing Cluster
- **Business Analysis/Business** Computer Applications
- **Keyboarding I/Business** Communications I
- **Keyboarding I, II and III**
- **Business Communications I, II and III**
- **Electronic Information Processing**
- **Advanced Electronic Information Processing**
- **Shorthand-Transcription**

Financial Cluster

- **Business Analysis/Business Computer Applications**
- **Keyboarding I/Business Communications I**
- **Accounting**
- **Advanced Accounting**
- **College Accounting***
- **Business Law**
- **Financial Information Processing**

Marketing Cluster

- **Business Analysis/Business Computer Applications**
- **Principles of Marketing**
- **Keyboarding I/Business Communications I**
- **Business Ownership and Marketing**
- **Accounting or Financial Information Processing**
- **Business Law**

Systems Operations Cluster

- **Business Analysis/Business Computer Applications**
- **Keyboarding I/Business Communications I**
- **Systems Operation**
- **Advanced Systems Operation**

* **A sequence may contain no more than two units of accounting, which may consist of Accounting and Advanced Accounting, or Accounting and College Accounting, but not Advanced Accounting and College Accounting. Students who have not completed the Accounting course may not enroll in advanced Accounting.**

Health Occupations Education

- **Nurse's Assistant Program**
- **Habilitation/Rehabilitation Assistant Program**
- **Personal Care Aide/Home Health Aide Program**
- **Dental Assistant Program***
- **Medical Assistant Program***
- **Dental Laboratory Technician Program***
- **Medical Laboratory Assistant Program***
- **Practical Nurse Program****

* **A 5-unit sequence in satisfaction of diploma requirements will consist of the HOE Core plus two units of these programs, but additional units are necessary for the development of job proficiency and completion of study of the content required for national certification.**

** **There are two aspects of the Practical Nurse study requirements to be considered: 1) the sequence-toward-diploma requirements (5- to 7-units program), and 2) the study-toward-licensing requirements (11-unit program). Practical nursing students may acquire the HOE Core competencies within the 5- to 7-unit PN sequence, and must pass the HOE Core proficiency examination. This sequence is designed to serve as the foundation of the Practical Nursing Program, as well as to allow students who do not complete the entire program to complete sequence requirements and qualify for New York State Nurse Aide registration. Practical nursing students must complete the 11-unit program to be eligible for the PN licensing examination. The State Education Department's Office for the Professions continues to hold responsibility for registering programs of Practical Nurse education.**

Home Economics Education

- Human Services and Family Studies Cluster
  - Human Development Core
  - Parenting
  - Child Development
  - Early Childhood Education
  - Adolescent Psychology
  - Family Dynamics
  - Gerontology
  - Careers in Human Services
  - Entrepreneurship in Home Economics
  - Independent Living
- Food and Nutrition Cluster
  - Food and Nutrition Core
  - Food Preparation and Nutrition
  - Nutrition, Health, and Fitness
  - Applied Food Science
  - Culture and Food
  - Gourmet Food
  - Commercial Food Program
  - Entrepreneurship in Home Economics
  - Independent Living
- Textiles and Design Cluster
  - Clothing and Textiles Core
  - Housing and Environment Core
  - Interior Design
  - Home Furnishings
  - World of Fashion
  - Clothing Production
  - Entrepreneurship in Home Economics
  - Independent Living

Technology Education

- Communications Cluster
  - Communications Electronics
  - Communications Systems
  - Computer Aided Design
  - Computer Applications
  - Computer Graphics
  - Creativity and Innovation
  - Graphic/Electronic Processes
  - Graphic Communications
  - Architectural Drawing
  - Design and Drawing for Production
  - Photography
- Electronics Cluster
  - Audio Electronics
  - Computer Aided Design
  - Computer Applications
  - Electricity/Electronics
  - Communication Electronics

Digital Electronics
Creativity and Innovation
Design and Drawing for Production

Materials Cluster
Computer Aided Design
Computer Aided Manufacturing
Materials Processing
Production Research and Development
Residential Structure
Creativity and Innovation
Design and Drawing for Production
Production Systems or Construction Systems
Production Systems or Manufacturing Systems
Technical Drawing

Transportation Cluster
Computer Aided Design
Transportation Systems
Aerospace
Energy Applications
Electricity/Electronics
Land Transportation
Creativity and Innovation
Digital Electronics
Design and Drawing for Production
Technical Drawing

Pre-Engineering Cluster
Principles of Engineering
Computer Aided Design
Computer Applications
Automation and Robotics
Design and Drawing for Production
Digital Electronics
Creativity and Innovation
Architectural Drawing
Technical Drawing

Trade and Industrial Education *

Construction Industry and Building Maintenance Occupations
Carpentry
Masonry
Electricity -- Residential, Industrial, Commercial
Plumbing/Heating
Heating, Ventilating, Air Conditioning
Remodeling and Repair

Drafting Occupations
Drafting Fundamentals
or
Introduction to Computer Aided Drafting
plus one of the following specializations:
Architectural Drafting
Electrical/Electronic Drafting
Electromechanical Drafting
Machine Drafting

Electronics/Electromechanical Equipment Occupations
- Electronics Technician
- Major Appliance Service Technician
- Business Equipment Technician
- Home Entertainment Systems Technician
- Communications Technician
- Computer Repair Technician

Graphics, Printing, and Visual Communications Occupations
- Professional Photography
- Advertising Design and Production
- Graphic Communication

Motorcycle, Marine, and Outdoor Equipment Maintenance Occupations
- Marine Technician
- Outdoor Power Equipment Technician
- Motorcycle, MoPed, ATV Service Technician

Precision Metalwork Occupations
- Combination Welder
- Metal Fabrication
- Machinist, Entry-level
- Production Machine Tender
- Sheet Metal Fabrication
- Sheet Metal Service Technician

Vehicle Maintenance and Repair Occupations
- Auto Body Repairer
- Service Center Specialist -- Automotive
- Heavy Equipment Specialist
- Diesel Engine Specialist
- Heavy Equipment Repair and Operation

* See Page 15 for information regarding inclusion of Occupationally Related Science and Occupationally Related Mathematics in Trade and Industrial Education sequences of 6 to 8 units.

Diversified Cooperative Occupational Education Sequence -- 5 Units Minimum
- Introduction to Occupations (1 unit)
- Related General Instruction -- State Curriculum (1 unit)
- Related Occupational Education (1 unit from among:)
  - Business/Marketing Education courses
  - Health Occupations Education courses
  - Home Economics Education courses
  - Technology Education courses
  - Agricultural Education courses
  - Technical Education courses
  - Trade and Industrial Education courses
- On-the-Job Supervised Work (2 units of 300 hours each)

Discrete 5-unit Sequences of Occupational Education

Discrete 5-unit sequences are those State sequences of five or more units of credit in which there may be no substitution for component courses listed. Such discrete sequences are offered in the following instructional program areas.

Health Occupations Education

- Dental Assistant
- Dental Laboratory Technician
- Home Health Aide
- Medical Assistant
- Medical Laboratory Assistant
- Nurse's Assistant
- Personal Care Aide/Home Health Aide
- Practical Nurse
- Habilitation/Rehabilitation Assistant

Technical Education

- Aerospace Technology
- Architectural Technology
- Civil Technology
- Computer Data Acquisition and Control
- Computer Technology
- Electromechanical Technology
- Fashion Design Technology
- Manufacturing Technology
- Mechanical Technology
- Systems Technology
- Technical Electronics/Computer Circuitry

Trade and Industrial Education

- Aviation Airframe Maintenance Technician (Certified)
- Aviation Powerplant Maintenance Technician (Certified)
- Robotics Technician
- Licensed Cosmetologist

TRANSFER STUDENTS

Occupational Education students transferring from out-of-state, in the later secondary schools years, may be given special consideration in meeting some diploma requirements. Such students, transferring --

- before the start of grade 11 must complete all pertinent study requirements and appropriate available State examinations.
- between the start of grade 11 and grade 12, must meet sequence requirements and complete at least one appropriate State examination.
- after the start of grade 12 must meet sequence requirements, but may be exempted from State examination requirements.

OCCUPATIONAL EDUCATION COURSE/PROGRAM DESCRIPTIONS

Introduction to Occupations

This 1-unit course is a required component of each Occupational Education sequence. It is designed to help students to develop transferable skills essential to all occupations, and to explore various occupational areas. The course is organized as two 1/2-unit parts. The first part consists of the two required modules, The Working Citizen and Personal Resource Management. The second part is composed of two of the several optional modules which provide instruction on the skills and knowledge of a variety of occupational areas. The course may be offered in a number of ways and times, to best meet the needs of the schools and their students.

Agricultural Education

Agriculture Production and Science Occupations Cluster

Students enrolled in this cluster will acquire basic technical, manipulative, job-related, and societal skills in preparation for entry into employment and/or higher education in production agriculture and related science occupations involving both small and large animal and plant production, including horticulture. Within this cluster, students may select an area of study emphasis from Animal Science, Business Management, Mechanical Science, or Plant Science.

Agricultural Business Management and Service Occupations Cluster

Students enrolled in this cluster will acquire basic technical, manipulative, job-related, and societal skills in preparation for entry into employment and/or higher education in agricultural business and related services in areas such as Agricultural Mechanics, Agricultural Supplies, and all Agricultural Services, such as animal grooming, artificial insemination technology, chemical application services, and management services. Within this cluster, students may select an area for study emphasis from Animal Science, Business Management, Mechanical Science, or Plant Science.

Natural Resource and Ecological Occupations Cluster

Students enrolled in this cluster will acquire basic technical, manipulative, job-related, and societal skills in preparation for entry into employment and/or higher education in areas such as conservation, forestry, and fishery occupations. Within this cluster, students may select an area for study emphasis from Business Management, Conservation Science, Mechanical Science, or Plant Science.

Business/Marketing Education

Accounting

A 1-unit course designed to develop competence in the application of accounting theory. Students will process transactions through the entire accounting cycle in a service and merchandising business. They will also be introduced to automated accounting, and be required to use a computer to process accounts receivable, payroll, and transactions specific to a service business.

Advanced Accounting

A 1-unit course which builds on the Accounting course and is designed to develop entry-level proficiency in the accounting field. Content includes partnership and corporate accounting, notes payable and notes receivable, depreciation, inventory management, and the accrual basis of accounting. Students will also have the opportunity to further their understanding of the use of the computer as an accounting tool.

Prerequisite: Accounting

College Accounting

A 1-unit course designed for those students who plan to enter a post-secondary program of business study. Content of the course will parallel the first semester of a college introductory accounting course. This course may be elected by Regents diploma students or students who have successfully completed the Accounting course. The program of study should be affiliated with a postsecondary institution.

Note: Students who have completed Advanced Accounting may not use College Accounting for sequence credit.

Business Communications I, II, III

Three 1/2-unit courses which may be used as part of a Business/Marketing Education sequence and/or as the fourth or fifth unit of English by students pursuing an occupational education sequence. Listening, speaking, reading, writing, and nonverbal communication skills are emphasized and developed within the context of business and industry applications. The nature of communications in today's business society, the language system, the importance of emerging technology in relation to communication skills, and the technical aspects of language are included. The course content may be organized as three independent 1/2-unit courses, or as a full-year plus one-semester course. Business Communications I may also be used as the optional 1/2-unit of Introduction to Occupations.

Business Analysis/Business Computer Applications

A 1-unit course which can be organized as a full-year course, or as two 1/2-unit courses scheduled individually.

Business Analysis offers a broad overview of modern business organization and operation. Students learn that today's business organizations rely on a variety of systems and subsystems to complete transactions as they adapt to the emerging Information Age. Students examine how businesses are organized to provide a product, a service, an idea, or a combination of these, and are acquainted with activities commonly utilized by most businesses to enable them to meet customers' needs and demands.

Business Computer Applications provides a hands-on opportunity to students to explore some of the modern computer software productivity tools used by businesses. Students become familiar with the manipulation of data through the use of software programs for word processing, databases, spreadsheets, and graphics. By using these programs in various ways, students become acquainted with the interrelationships among information and computer programs, and the business activities, systems and concepts taught in the Business Analysis course.

Business Law

A 1-unit course which may be used as a component of a Business/Marketing Education sequence, and/or as the fifth unit of Social Studies. Applications of the business laws, as they affect the individual, are featured; the relationship of the laws to an individual's personal, as well as occupational, life is emphasized.

Business Mathematics

A 1-unit course designed to develop the specific skills required to solve a wide variety of mathematical problems commonly found in everyday business situations. Successful completion of this course, within prescribed guidelines, will provide one unit of credit, which may be used as one of the two units of mathematics required for a local diploma or as one unit of a 3-unit local mathematics sequence.

Business Ownership and Marketing

A 1-unit course designed to provide to students a basic foundation in the starting and managing of a small business. Content includes selected entrepreneurial skills as well as those necessary to the management, merchandising, and marketing functions inherent in the operation of a small business. Students successfully completing the course will have a solid foundation in concepts that may be utilized in starting a small business or entering employment immediately after high school, or as a basis for postsecondary study.

Electronic Information Processing

A 1-unit course designed to develop both technical and nontechnical office and information skills. Opportunities are provided for the further development of word processing skills, and for the initiation and processing of text and data, electronically. Instruction in machine transcription, communications, and manual and electronic filing systems are included, as is introduction to desktop publishing. Computer use is required.

Prerequisite: Keyboarding I

Advanced Electronic Information Processing

A 1-unit course which emphasizes development of advanced word processing and desktop publishing skills, and initiates skill development in using electronic databases, spreadsheets, and graphics. Employment seeking skills are also taught.

Prerequisite: Electronic Information Processing

Financial Decision Making

A 1-unit course designed to explore and apply investment information necessary throughout life, to take advantage of financial opportunities available at various earning levels. The forecasting of earnings and selecting of appropriate investments as part of the effective management of personal assets are also taught.

Financial Information Processing

A 1-unit course designed to develop both manual and electronic (computerized) business recordkeeping skills. The course will enable students to develop entry-level proficiency in common financial information processing areas, such as inventory, purchases and accounts payable, sales and accounts receivable, cash, and payroll. Use of computer is required, and integrated throughout the course.

Keyboarding I, II, III

Three 1/2-unit courses which may be organized as a one-semester, a full-year, or a full-year plus one semester program of instruction. Concepts are taught then repeated, each repetition consisting of more complex learnings. A variety of skill-building routines are employed to help students to develop basic competency on both the alphabetic and numeric keyboards. A review of language rules governing use of punctuation, plurals, and sentence structure is included. Students will produce letters, memoranda, and reports as application and reinforcement of the rules. Keyboarding I may also be used as the optional 1/2-unit of Introduction to Occupations.

Principles of Marketing

A 1-unit course that introduces students to the important role that marketing plays in our economic system. Content revolves around the basic marketing functions of financing, risk management, selling, promotion, pricing, purchasing, marketing information management, product/service/idea planning, and distribution. Although students are given the opportunity to refine entry-level employment skills, the course focuses on more advanced career-sustaining skills associated with employment in various marketing subsystems.

Shorthand-Transcription

A 1-unit course designed to develop minimum employment competency in alphabetic or machine shorthand systems, through study of shorthand theory and acquisition of shorthand speed and transcription skills. The course may be based on a symbolic, an alphabetic, or a machine shorthand system.

Systems Operations

A 1-unit course that develops skills and understandings related to computer systems. Students learn skills necessary to operations management in a computer installation, including system console operations, peripheral equipment utilization, systems maintenance, job scheduling, and applications programming.

Note: Completion of the Business Analysis/Business Computer Applications course prior to entry into the Systems Operations course is strongly recommended.

Advanced Systems Operations

A 1-unit course for the advanced student of computer operations management. Students continue their learning about system console operations, peripheral equipment, input/output control, and computer languages. Successful completion of the course prepares the student for immediate employment as a console operator, peripheral equipment operator, data-control clerk, disk file librarian, or junior computer programmer.

Prerequisite: Systems Operations

Health Occupations Education

HOE Core

A required component of every Health Occupations Education sequence, this 2-unit course emphasizes the foundation skills necessary to any health careers employment. *Content includes an introduction to health* careers, legal and ethical responsibilities, health related terminology, leadership development, basic skills relating to computer applications, safe handling of clients, first aid, cardio-pulmonary resuscitation, preventing the spread of infections, and a broad overview of body structure and function, as well as human development and the health needs of all age groups.

Dental Assistant

A 2- to 4-unit program designed to prepare people to work in private dental offices, dental clinics, health maintenance organizations, ambulatory care centers, neighborhood or community health centers, retirement community infirmaries, extended care facilities, large nursing homes, and other dental care settings. The Dental Assistant works in a supporting capacity under the supervision of a dentist. Content is directed toward development of the skills, knowledge, and attitudes necessary to assist a dentist at chairside, in the dental office laboratory, and to manage the dental treatment and reception areas. Field experience must be integrated into this program.

Dental Laboratory Technician

A 2- to 6-unit program designed to prepare people for employment in a dental office, dental prosthetics laboratory, or other dental laboratory. Content is directed toward development of the skills, knowledge, and attitudes necessary to construct and repair dental prosthetics in exact conformance to specifications. Field experience must be integrated into this program.

Elder Care

A 2-unit course which builds on the skills and theory acquired through the HOE Core and subsequent specialization programs to develop skills, knowledge, and attitudes necessary to serve the unique and varied needs of the elderly. Awareness of the elderly's right to services that promote autonomy, choice, and dignity is emphasized. This course may be used as additional units in any HOE sequence of six or more units. Field experience must be integrated in the instruction.

Habilitation/Rehabilitation Assistant

A 2-unit program of preparation for employment in community residences, day treatment centers, sheltered workshops, developmental centers, and special education programs meeting the basic needs of developmentally disabled clients and helping them to reach their maximum potentials. Content is directed toward the use of teaching strategies which provide positive reinforcement of learned behavior. Field experience must be integrated in this instruction.

Medical Assistant

A 2- to 4-unit program of preparation for supporting work performed under the supervision of one or more physicians, in a physician's office, group practice office, or medical clinic office. Content is directed toward development of the skills, knowledge, and attitudes necessary to maintain and operate a medical office and provide office management services, assist the physician with medical histories, examinations and procedures, and perform routine laboratory tests. Field experience must be integrated into this program.

Medical Laboratory Assistant

A 2- to 6-unit program of preparation for supporting work performed under the direction of medical laboratory technicians, medical technologists, or pathologists, in commercial laboratories, hospital laboratories, clinics, public health agencies, pharmaceutical companies, research institutions, university laboratories, and other health care settings. Content is directed toward development of the skills, knowledge, and attitudes necessary to operate and maintain laboratory equipment and supplies, provide laboratory services, perform basic diagnostic tests, operate and maintain a laboratory supply area, and perform general routine activities related to laboratory operations. Field experience must be integrated into this program.

Nurse's Assistant

A 2-unit program offering theory and skill training in the care of clients in a hospital or nursing home setting. Content includes development of basic skills in the area of personal needs, and specialized skills required to promote wellness and provide for client comfort. Care of the acutely or chronically ill and the elderly is also addressed. Supervised clinical experience must be integrated into this program. Students successfully completing this program will be eligible for New York State Nurse Aide registration if the program is registered with the New York State Department of Health.

Personal Care Aide/Home Health Aide

A 2-unit program of preparation to meet, in their homes, the needs of the acutely or chronically ill or disabled, including children and the elderly. Content emphasizes the adaptation of personal care and specialized skills to provide care in the client's home, and includes nutrition and meal preparation, safety, and maintaining the client's environment. Field experience must be integrated into this program.

Practical Nurse

An 11-unit program of preparation for employment as an entry-level Practical Nurse. Content is directed toward the development of skills, knowledge, and attitudes necessary to care for clients in various health care facilities, and includes scientific and mathematical concepts as well as developmental theories. Emphasis is placed on basic nursing skills and the effective use of the nursing process. Supervised clinical experience must be integrated into this program. Students completing the 11-unit program will be eligible for the New York State licensing examination.

Home Economics Education

Food Preparation and Nutrition Cluster

Food and Nutrition Core – FN-1-86

A 1/2-unit course which is a required part of all Food and Nutrition cluster, Human Service and Family Studies cluster, and Home and Personal Management cluster sequences. Content includes nutrition awareness, meal management, food purchasing and preparation, meal service, and related career exploration.

Food Preparation and Nutrition – FN-2-88

A 1/2-unit course which continues the concepts presented in the Food and Nutrition Core. Laboratory experiences reinforce the concepts of a healthy diet and the preparation of nutritious food products.

Nutrition, Health, and Fitness – FN-3-88

A 1/2-unit course in which students will relate the concepts of nutrition, diet, and exercise, to good health. The role of nutrients in the body, diet related conditions, special diets, diet analysis, nutrition of athletes, lifetime fitness, the effects of food preparation techniques on diet, and careers in the field of nutrition will be examined by the students.

Culture and Foods – FN-4-88

A 1/2-unit course in which students explore a variety of culture-specific foods and preparation techniques, to gain an understanding of cultural differences and the interdependence of world regions and nations. Current and projected foods careers will be explored.

Gourmet Food – FN-5-88

A 1/2-unit course which teaches advanced food preparation techniques, the importance of food appearance and presentation, and the use of specialized equipment. Careers in food photography, food journalism, and food styling are explored.

Commercial Foods Program – FN-6-88

A 1- to 10-unit program designed as a group of modules that can be combined in a variety of ways to design a course. The base modules, including human relations, safety, sanitation, and tools and utensils, are needed by every worker and are emphasized throughout the program. Job-specific modules are selected to focus on community needs and student needs and abilities.

Food Science -- FN-3-87

A 1-unit course which develops understanding of how basic scientific principles are applied to food preparation and meal management, and of the nutritional consequences of food preparation procedures. Sensory, Chemical, and nutritive qualities of foods, and the sanitary aspects of preparation, are studied through demonstrations, laboratory experiments, and student preparation of a product or solving of a nutrition related problem. Completion of this course may be considered as completion of one unit of Occupationaly Related Science.

Human Services and Family Studies Occupations Cluster

Human Development Core -- HF-1-86

A 1/2-unit course which is a required part of all Human Services and Family Studies, Food and Nutrition, and Home and Personal Management sequences. Content focuses on the adolescent and how each relates to others -- peers, young children, adults -- and on related career opportunities.

Parenting -- HF-2-88

A 1/2-unit course centered on the vast number of choices individuals make in relation to parenting. The economic, social, educational, and physical conditions which influence parenting are identified, and their implications explored. Skills in working with children of all ages will be discussed and applied in laboratory or community situations.

Child Development -- HF-3-88

A 1/2- or 1-unit course in which the physical, emotional, intellectual, and social development of the infant, toddler, preschool and school-age child, and child having special needs, are studied. Daily care, guidance, discipline, and other parenting, care-giver, and social responsibilities are studied and skills practiced in a variety of situations.

Early Childhood Education Programs -- HF-4-88

A 1/2- to 8-unit program which provides in-depth study of early childhood education, including related managerial skills and curriculum and developmental theory and application. Students observe, participate in, and develop a variety of activities with infants, preschoolers, and young children which will enhance the development of these children. Skills leading to job competence are emphasized, practiced, and evaluated in laboratory situations. Job-specific modules are selected to focus on community needs, and student needs and abilities.

Adolescent Psychology -- HF-5-88

A 1/2-unit course which focuses on the study of adolescent growth and development. Students become responsible for their personal growth -- social, emotional, intellectual, and physical -- and explore human values and their relationship to basic human needs. Adolescent crises are identified and examined.

Family Dynamics -- HF-6-88

A 1/2-unit course which examines the dynamics of family life, and applies the learnings to each student's present and future family situation. Content includes student demonstration of skills in communication, decision making, problem solving, and resources management, as related to family life and career responsibilities.

Gerontology -- HF-7-88

A 1/2-unit course designed to help students understand interpersonal relationships between themselves and the elderly. Students investigate the process of aging its needs and challenges. Skill development and career opportunities are included.

Careers in Human Services -- HF-8-88 (Field testing through 1990)

A 1/2-unit course which explores a variety of career opportunities in the human services field, and provides understanding of the skills and knowledge necessary to effectively work in it. Content includes study of the needs of individuals and families and how human service agencies help fulfill the needs, and experience in

community agencies, under the supervision of qualified practitioners. Orientation, observation, participation, and recording are the major requirements of the experiences.

Textiles and Design Cluster

Textiles and Design Core – TD-1-86

A 1/2-unit course which is a required part of all Textile and Design and Home and Personal Management cluster sequences. Content includes the cultural and historical aspects of textiles and clothing, personal appearance, the design, construction, and selection of clothing, and related career opportunities.

Housing and Environment Core – TD-2-86

A 1/2-unit course which is a required part of all Textiles and Design and Home and Personal Management cluster sequences. Content is designed to provide a foundation for management of housing information as it relates to individual inhabitants. Functional aspects of home and community living, and career possibilities, are included.

Interior Design – TD-3-88

A 1/2-unit course which provides the opportunity to apply the principles of design to interior planning. Content includes projects involving problem solving, decision making, and management of time, energy, and interior space. A client or situation approach will relate course activities to career opportunities.

Home Furnishings – TD-4-88

A 1/2-unit laboratory course designed to develop skill in selecting and creating soft home furnishings, and understanding of the principles of selection and repair of wooden furniture. Content includes projects in design and/or construction of window treatments, slip covers, and repair of furnishings.

World of Fashion – TD-5-88

A 1/2-unit course which applies the principles of design to the field of fashion. Opportunity is provided to explore the role of fashion in everyday life, to develop a sense of personal style, and to identify and examine careers related to the fashion industry.

Clothing Production – TD-6-88

A 1/2-unit laboratory course which provides an opportunity to expand acquired skills in clothing production. Content includes projects which develop abilities to handle special fabrics, line a garment, adapt the designs in a commercial pattern, and repair and restyle ready-to-wear or outmoded clothing by specialized techniques.

All Home Economics Clusters

Entrepreneurship in Home Economics – FHT-1-88

A 1/2- to 1-unit course in which students apply skills acquired in a specialization program. Students analyze themselves in relation to an entrepreneurial career, develop a business plan and conduct an in-school business or participate in an appropriate cooperative work experience. Content includes student projects based on a Home Economics cluster or combination of clusters.

Independent Living – FHT-2-88

A 1/2- to 1-unit course which identifies the challenges facing adolescents as they assume adult responsibilities, and provides opportunities to explore future trends and important decisions. Course focus is on the importance of planning in achieving goals which will create the desired future, and on accepting the responsibilities of adulthood. The course requires students to practice and demonstrate competence in leadership and the financial management skills needed for successful living throughout the life cycle in a sophisticated technological society.

Technical Education

Aerospace Technology Cluster

A technical discipline centered around the design, construction, operation, and maintenance of all vehicles which operate above the earth's surface.

Architectural Technology Cluster

A technical discipline centered around the design, location, materials, construction, and maintenance of buildings of all types.

Biomedical Technology Cluster

A technical discipline centered around the combined efforts of the engineer and physician or biologic scientist, to develop and maintain devices, operations, and techniques to improve the health and well-being of mankind.

Chemical Technology Cluster

A technical discipline centered around the materials, design, construction, operation, and maintenance of manufacturing procedures concerned with chemical processes and the production of chemicals.

Civil Technology Cluster

A technical discipline centered around the materials, design, construction, and maintenance of large immobile structures, such as bridges, dams, highways, railroads, and skyscrapers.

Computer Technology Cluster

A technical discipline centered around the design, assembly, testing, and maintenance of computer circuitry and peripheral hardware.

Electrical-Electronic Technology Cluster

A technical discipline centered around the design, materials development, manufacture, and maintenance of devices which adapt and economically use electrical energy.

Electromechanical Technology Cluster

A technical discipline centered around the combined efforts of the electrical engineer and mechanical engineer to design, develop, and maintain devices which combine electrical and electronic principles and mechanical principles in their operation.

Energy Technology Cluster

A technical discipline centered around the design, development, and maintenance of devices which harness various forms of energy and challey it to useful economic purposes.

Enrichment Technology Cluster

A technical discipline centered around the application across several broad-based technologies, of the principles and concepts of mathematics and science. The instruction provides an introduction to engineering techniques for the student investigating the technical disciplines.

Fashion Design Technology Cluster

A technical discipline centered around the materials design, assembly, and maintenance of textiles machinery, and the products manufactured by this machinery.

Industrial Design Technology Cluster

A technical discipline centered around adapting form to function through design, materials, machines, and production of machine-made consumer and industrial goods. The field extends to all physical aspects and properties which may form a corporate image.

Marine Technology Cluster

A technical discipline centered around the design, construction, operation, and maintenance of all vehicles that operate on or below the water's surface.

Manufacturing Technology Cluster

A technical discipline centered around the design, development, and construction of an economically justifiable process by which a product will be produced, thus bridging the gap between product design and full production.

Materials Technology Cluster

A technical discipline centered around the design, testing, development, and transportation of materials used in manufacturing processes and products.

Mechanical Technology Cluster

A technical discipline centered around the design, materials, production, and maintenance of equipment that generates, transmits, or uses power.

Resource and Waste Management Technology Cluster

A technical discipline centered around the use and control of natural and recycled resources in manufacturing processes and products.

Systems Technology Cluster

A technical discipline centered around designing and installing integrated systems of people, materials, and equipment which will function effectively in a society made increasingly more complex by the technological explosion.

Technology Education

Foundation Courses

Electricity/Electronics

A 1/2-unit course providing study of electricity in the home: line and low voltage, electronic systems, passive and active devices, circuit applications, integrated circuits, and digital electronics.

Energy and Power

A 1/2-unit course providing study of the forms and resources of energy, energy conversion and the laws of thermodynamics, polar heating and cooling, energy-conscious design photovoltaics, and the energy crisis.

Materials Processing

A 1/2-unit course providing a broad, generic view of the way humans convert materials. The course differs from the traditional approach of studying a specific material, in studying various materials undergoing similar processing techniques, such as forming, separating, combining, and conditioning.

Graphic (Electronic) Processes

A 1/2-unit course which consists of instruction and hands-on activities in image design, computer technology, electronic imaging, equipment interfacing, telecommunications, prepress processes, image transfer, and finishing, desktop publishing, and legal ramification thereof.

Design and Drawing for Production

A 1/2- to 1-unit course that encourages visual problem-solving, using a common graphic language to describe forms in the man-made environment. Included are six basic areas of technical drawing: orthographic, projection, pictorial, drawing, sections, auxiliaries, revolutions, transitions and developments, plus the elements of design. To enable the student to analyze, creatively design, and critically evaluate these forms, the syllabus requires researching for historical precedents, cultural references, environmental impact, and future vision.

Technical Drawing

A 1/2-unit course that teaches basic concepts and principles of technical drawing -- projection, size description, pictorial representation, and techniques and tools.

Systems Courses

Communications Systems

A 1/2-unit course providing instruction on the electronic, graphic, and photographic systems which people use to communicate information and ideas.

Construction Systems

A 1/2-unit course providing instruction in the construction aspects of production. It is organized around the universal systems model with inputs, resources, processes, outputs, and control as major topics. These five topics have been specifically tailored to construction of a structure on a site.

Production Systems

A 1/2-unit course providing instruction on the systems of manufacturing and construction; their resources, processes, products, and quality assurance; their impact on society, the economy the environment, and manufacturing.

Manufacturing Systems

A 1/2-unit course providing instruction in the manufacturing aspects of production. It is organized around five topics: manufacturing inputs, resources, processes, outputs, and control. These five topics have been specifically tailored to manufacturing and correlate very closely with the universal systems model.

Transportation System

A 1/2-unit course presenting an overview of aerospace, land, and marine transportation systems organized into five topics -- inputs, resources, processes, outputs, and control -- which are specifically tailored to transportation.

NOTE: Each Systems and Foundation course provides 1/4-unit of credit in Introduction to Occupations, except the Production Systems course which provides 1/2-unit of Introduction to Occupations credit.

Electives

Architectural Drawing

A 1/2-unit study of design and drafting related to building construction. Topics include culture and history, tools and techniques, lettering and dimensioning, and preparation of site, floor, elevation, section, and perspective drawings.

Aerospace

A 1/2-unit course introducing the growing field of aerospace activities. Topics include: historical evolution of aerospace, fundamentals of flight, navigation, communication, meteorology, flight physiology, propulsion systems, space technology, and aerospace careers and occupations.

Audio Electronics

A 1/2-unit study of amplifier systems, including theory and application, sound generation theory and control, and processing systems. The background knowledge and skills necessary to purchase and operate amplifier devices with a reasonable degree of technical competence, will be developed.

Automation and Robotics

A 1/2- or 1-unit course which focuses on the application of the latest computer technology to the control of such technological systems as household appliances and automobile and telecommunications systems. Course topics include Evolution of Automation, Computer Technology, Sensors and Actuators, CAD/CAM, CIM (Computer Integrated Engineering), CAE (Computer Aided Engineering), and The Impact and Future of Automation.

Computer Aided Design (CAD)

A 1/2-unit introduction to the various input and output devices and computers that configure computer aided design systems. Content includes application of a computer aided design system to design, mechanical drawing, and drafting. The course develops understanding of the types, uses, and advantages of the different

components which comprise a computer aided design system, and of the impact of computer aided design on industry and careers.

Computer Aided Manufacturing (CAM)

A 1/2-unit course which develops a base of knowledge related to the manufacturing industry's robots and their uses. Students use and describe the functional apparatus related to computer aided manufacturing, learn how a program controls and directs a robot to perform a task, and become familiar with the capabilities and limitations of robots.

Computer Applications

A 1/2-unit course providing instruction on the evolution and architecture of today's computer, and its impact on education and employment. Personal, social, industrial, and commercial applications of computer systems will be emphasized.

Computer Graphics

A 1/2-unit course which provides understanding of the types, uses, and advantages of the different components of computer graphics and text editing computer systems, and the impact on industry of computer graphics and text editing. Hands-on experience, involving computer graphics and text editing for technological application, is provided.

Creativity and Innovation

A 1/2-unit course which encourages the solving of technical problems through the use of unconventional approaches. Topics include: methods of approaching creativity and innovation, developmental factors of creativity and innovation, and cultural impact of creativity and innovation. Given a defined supply of materials, students will use laboratory facilities to optimize solutions to stated technical problems.

Communication Electronics

A 1/2-unit study of communication electronics systems, including communication fundamentals and electrical/electronic systems. The basic principles of communication, the functions of major components in a complete system, and career opportunities in the field will be investigated.

Design and Drawing for Production

A 1-unit course which emphasizes creative problem solving, designing, and technical drawing. The course reflects the approach used in business and industry to develop new products. Students develop solutions to various design or product problems, and proposed solutions are researched, sketched, refined, and rendered as technical drawings. Basic elements of design, and the six basic areas of technical drawing, are covered.

Digital Electronics

A 1/2-unit study of binary logic, decision making, logic gates and combination logic circuits, digital signals, number systems, gate symbols, and truth tables necessary for the complete understanding of digital circuits and systems found in the home and commercial electronic equipment. Logic systems, sequential logic circuits, and logic systems applications are included.

Energy Applications

A 1/2-unit study of the evolution of energy sources as a foundation of technology, and fundamental to systems of communication, transportation, and production. The instruction provides to students the opportunity to analyze systems applications of energy sources through appropriate performance testing and experimentation.

Graphic Communications

A 1/2-unit study of graphic communication systems, and how these interface with other mediums of communication. System inputs, including strategy, data collection, design considerations, layout steps, image generation, and copy preparation are covered. Processes, including image assembly, proofing, and carrier preparation, and outputs, including impact image transfer, nonimpact transfer, and finishing processes are covered, as are quality control and careers.

History of Technology

A 1/2-unit course of study of technology from the earliest use of tools through modern information based systems. The development of technology, through the Agricultural, Industrial, and Information Ages, will be traced.

Production Research and Development

A 1/2-unit study of the significance and procedures of the research and development process, when used in the production of material goods, the improvement of industrial processes, and the acquisition of new knowledge. The course design involves the students in realistic, hands-on research and development. Brainstorming, library research, problem solving, modeling, prototype production, and other skills are developed.

Photography

A 1/2-unit course designed to expand students' understanding of the photographic medium and its role in society. Students are introduced to general terminology, safe operating procedures, the processes of black and white still-image photography, career opportunities, and selected developments in technology/art that have made the field of photography important.

Principles of Engineering

A 1/2- or 1-unit integrative, hands-on, and laboratory based course which introduces students to concepts of engineering by focusing on the application of these concepts to solving problems contained in "real world" case studies.

Residential Structures

A 1/2-unit study of the many systems and skills involved in constructing nonhighrise residential buildings. Course content includes resources, such as materials, supplies, and finances; processes, such as planning framing, roofing, and insulating; and outputs and effects, such as quality assurance, environmental impact, and economic consequences.

Trade and Industrial Education

Aviation/Aerospace Maintenance, Manufacturing, and Repair Occupations

This program cluster includes the occupational competency, at the beginning-worker level, of those occupations in the aircraft/aerospace industry. The totality of maintenance of the aircraft or aerospace device is usually the responsibility of a group of workers highly trained and organized into occupational specializations. Instructional programs in this program cluster include: Aviation Airframe and Powerplant Maintenance Technician, Powerplant Test Cell Technician, Airframe Manufacturing Technician (Electrical), Aircraft Cleaner Technician, and Cain Interior Maintenance Technician.

Cosmetology Occupations

This program cluster offers employment skills development to students interested in beauty culture and barbering. The cosmetology licensing program of 1000 clock-hours of instruction, and the two-part State Board Examination must be successfully completed before employment as an operator and/or shop manager. Nonlicense programs may be offered toward satisfaction of diploma sequence requirements.

Construction Industry and Building Maintenance Occupations

This program cluster includes instruction in the skilled trades and supporting semiskilled occupations involved in the erection, finish, and remodeling, and repair and maintenance of residential and commercial buildings. Instruction develops beginning-worker competency in such occupational areas as Carpentry, Masonry, Construction Electricity, Plumbing, Heat Pump Installation and Service, Commercial Air Conditioning Installation, and Building Maintenance.

Drafting Occupations

This program cluster develops the competency required of beginning workers in occupations involving preparation of graphic plans for the production of manufactured items, mostly hard goods. A full range of planning skills from initial design sketching to fine detailing and lettering of completed working drawings may be

included. Also included are the skills required in Computer Assisted Drafting -- alone or in combination with Computer Assisted Manufacturing. Typical titles of components of this cluster are: Drafting Fundamentals, Blueprint Reading -- Welding, Electrical Drafting, and Computer Aided Drafting (CAD).

Electronics/Electromechanical Equipment Occupations

This program cluster develops occupational competency, at the beginning-worker level, in occupations involving operation, adjustment, and repair of a wide array of electronic and electromechanically operated devices found in homes, offices, or factories, and may include some such devices found in land, air, and marine vehicles. Typical titles of components of this program cluster are: Laser/Fiberoptics Technician, Microwave Oven Technician, Major Appliance Service Technician, Telephone Systems Technician, Cable and Antenna Systems Technician, Biomedical Electronics Technician, and Typewriter/Word Processor Field Engineer.

Graphic, Printing, and Visual Communications Occupations

This program cluster develops occupational competency, at the beginning-worker level, previously developed by programs titled Graphics, Printing, Photography, and Commercial Art. Typical titles of components of this program cluster are: Professional Photography, Architectural Photography, Photographic Color Printing, Offset Lithography/Printing, Relief Printing Systems Operator, Graphic Design, Advertising Design and Production, and Videography.

Motorcycle, Marine, and Outdoor Power Equipment Maintenance Occupations

This program cluster develops competency, at the beginning-worker level, in occupations involving the operating, adjusting, repairing, and maintaining of such equipment as motorcycles, boats with various engines, recreational vehicles of many types, and outdoor power equipment used in residential settings and for commercial purposes. Typical titles of components of this program cluster are: Tune-up Technician -- 2- and 4-cycle, Diagnostician, Refurbisher, Parts Specialist, Chain Saw Technician, Motorcycle Technician, Snowmobile Technician, Fiberglass Repair Technician, and Yard Person (Marine) Inboard Technician.

Precision Metalwork Occupations

This program cluster develops competency, at the beginning-worker level, previously developed in programs titled Welding, Machine Shop, and Sheet Metal. Typical titles of components of this cluster are: Welder Operator -- Shielded Metal Arc, Welder Robot Technician, Quality Control Inspector, Lathe Operator, Machinist, CNC Turning Operator, Sheet Metal Layout Technician, and Sheet Metal Estimator/Sketcher.

Vehicle Maintenance and Repair Occupations

This program cluster develops competency, at the beginning-worker level, in a wide range of occupations covered by its title. The repair and maintenance, or manufacture, of specific vehicles is taught, although vehicle operation and fabrication of components may be incidental competencies. Vehicles included are those normally powered by internal combustion or electric engines/motors, such as automobiles, trucks, buses, and tractor-type vehicles used in industrial-commercial pursuits. Specifically excluded are those vehicles covered in other program clusters, such as motorcycles, snowmobiles, marine and outdoor power equipment, and aircraft and aerospace vehicles. Typical titles of components of this cluster are: Vehicle Painter, Auto Body Repairer, Service Center Specialist, Warranty Administrator, Diesel Engine Specialist, and Used Car Renovator.

Special Codisciplinary Four-Unit Drafting Sequence

Technical Drawing

A 1/2-unit Technology Education course. See page 51 for description.

Computer-Aided Design (CAD)

A 1/2-unit Technology Education course. See page 52 for description.

Design and Drawing for Production

A 1-unit Technology Education/Art Education course. See page 51 for description.

Architectural Drawing

A 1/2-unit Technology Education course. See page 52 for description.

Site Preparation Drafting

A 1/2-unit Trade and Industrial Education derived course in the preparation of site, surveying, road and parking area, utilities, and landscape drawings.

Project Presentation Drawing

A 1/2-unit Trade and Industrial Education derived course in the preparation of perspective, pictorial, and illustration drawings, and sketching and rendering in black and white and in color.

Electronic Drafting

A 1/2-unit Trade and Industrial Education derived course in printed-circuit board and integrated circuit drafting.

Project Simulation

A 1/2-unit Trade and Industrial Education course in the production of scale models and robotics, and computer produces three-dimensional models and animation.

Tool and Die Drafting

A 1/2-unit Trade and Industrial Education course in the production of detailed drawings of milling fixtures, drill jigs, and punch and die sets.

Structural Drafting

A 1/2-unit Trade and Industrial Education derived course in the production of drawings of beams, columns, and trusses, utilizing all common construction materials.

Construction Drafting

A 1-unit Trade and Industrial Education derived course in the production of foundation and floor plans, elevations, sections and detail drawings, schedules (e.g., doors/windows, finish, electrical, plumbing), and budget estimates for residential and light commercial (e.g., structural steel, prestressed concrete, HVAC, and other "commercial" details) construction.

Manufacturing Drafting

A 1-unit Trade and Industrial Education derived course in electromechanical drafting, including geometric dimensioning, gears and cams, welding, piping, fasteners and threads, castings, and developments and intersections, sections and auxiliary views, layout drawings, and electronic schematics.

SECTION IV

OTHER PROGRAM ELEMENTS

Regulation

CR 141.4 Programs and Services (summarized)

> Related and supporting educational activities include cooperative work experience, student occupational education leadership organizations, counseling, placement, exploration and orientation, remedial and enabling instruction.

STUDENT LEADERSHIP DEVELOPMENT

Student leadership development is an integral part of occupational education instruction, which is enhanced by the several student leadership organizations. Students participating in these student leadership organizations benefit from their major emphasis on development, through such activities as contests, travel, and self-improvement opportunities, of the skills and abilities necessary to leadership in their occupational field. Competitive events and projects on an individual, team, and local chapter basis aid in the accomplishment of the performance objectives of the respective instruction. Student leadership organizations have proven to be very effective vehicles in infusing a student-centered community-based approach to occupational education. In addition, these organizations provide the school district with dynamic public relations programs.

Students who complete an acceptable program of Student Leadership Organization activities will have satisfied the Social Studies IV requirement of 1/2-unit of credit in Participation in Government. A description of such an acceptable program is provided in the Appendix of this Handbook. Schools considering implementation of such a program should consult the State Advisor of the respective Student Leadership Organization, or the:

Division of Occupational Education Instruction
One Commerce Plaza, Room 1623
Albany, New York 12234
(518) 474-2451

Policy Statement

Student leadership development, traditionally a part of occupational education instruction, has been included as part of the new curriculum developed as a result of the Futuring Project, the Regents Action Plan, and Part 100 of the Commissioner's Regulations. In addition, the mandate that all students receive instruction in Introduction to Technology and Home and Career Skills by the completion of grade 8, provides both additional opportunities and challenges to several student organizations, in providing materials, services, and recognition to a greatly increased number of students, teachers, and schools. The new Introduction to Occupations requirement for all occupational education students expands further these opportunities and challenges.

Student organizations which emphasize participation of members in local, regional, State, and/or national activities are significant means of developing student leadership, and are an integral part of an occupational education curriculum. Student organizations provide a structure for developing leadership, building character, instilling a cooperative spirit, inspiring civic pride, responsibility, and self-confidence, and providing service. Employers have consistently confirmed that occupational competence requires positive attitudes, values, and initiative, in addition to technical skills. The concepts, programs, and activities of student organizations provide unique opportunities for developing these essential career preparation skills.

Each education agency should provide to every student the opportunity to participate in student leadership development activities. All occupational education students should be provided the opportunity to participate in the educational activities of the student organization(s) which most directly relate(s) to their chosen instructional program. The occupational education student organizations recognized by the State Education Department include:

Student Organization	Related Instructional Program
Technology Education Student Association of New York (TESA-NY)	Technology Education
Distributive Education Clubs of New York (DECNY)	Marketing Education
New York Association of FFA; affiliate of the National FFA Orgnization	Agricultural Education
New York State Association of Future Business Leaders of America (FBLA)	Business Education
New York Association of Future Homemakers of America (FHA)	Home Economics Education
New York State Association of Health Occupations Students of America (HOSA)	Health Occupations Education
New York State Association of Vocational Industrial Clubs of America (VICA)	Trade and Industrial, and Technical Education

The payment of membership dues for activities within the classroom/laboratory is a voluntary act on the part of the student. Dues may be required, however, for participation in local, regional, State, or national activities sponsored by the respective State associations, occurring outside the classroom/laboratory.

The State Education Department's Division of Occupational Education Instruction will provide staff members to serve as advisors to each of the student organizations. The role of the Department Advisors will be to provide advice on, and to coordinate and assist in the development and promotion of, the educational programs offered by each student organization. In conjunction with the Boards of Trustees of the respective student organizations, the Department Advisors will ensure that the programs are an integral part of the curriculum, and will benefit students by encouraging personal growth and helping to prepare them for an occupation.

All occupational education student organizations must, of course, promote and encourage equal participation by all eligible students, without regard to sex, race, ethnic origin, or handicapping condition.

Students who complete an acceptable program of Student Leadership Organization activities will have satisfied the Social Studies IV requirement of 1/2 unit of credit in Participation in Government. A description of such an acceptable program is provided in the Appendix of this Handbook. Schools considering implementation of such a program should consult the State Advisor of the respective Student Leadership Organization, or the:

Bureau of Occupational Education Program Development
One Commerce Plaza, Room 1623
Albany, New York 12234
(518) 474-4806

COOPERATIVE OCCUPATIONAL EDUCATION PROGRAMS

Educators have long recognized the advantages inherent in acquiring on-the-job experience as part of a structured program of occupational education. One means of providing these experiences, and for facilitating the transition from school to work, is the job-site experience which is part of the specific education program, e.g. Health Occupations Education's "Supervised Clinical Experience." Another means is the cooperative occupational education program sponsored jointly by the school and public or private employers who are willing to provide supervision, pay, and work experience to students who have elected a sequence of occupational education, and who have made a career choice.

All Cooperative Occupational Education Programs have the same common objective of providing opportunities for students to learn and perform occupational skills on the job. These programs are designed to permit students to develop and demonstrate their skills at a supervised work site where the business and industrial community utilizes training plans developed cooperatively with students and school personnel. There is continuous feedback through a teacher-coordinator to the school staff concerned with the students' performance. The coordinator of the cooperative program must be certified to teach in a curriculum area where the related instruction and the work experience are to be conducted. In New York State, students usually participate in cooperative occupational education programs following and/or while enrolled in the instructional areas of agricultural, business/marketing, home economics, technology education and trade and industrial education, and receive credit for the "Co-Op" study as part of the occupational education sequence.

A Diversified Cooperative Occupational Program can be organized to provide experience in jobs related to individual career goals when the occupational courses desired are not available in the school. The term "diversified" is also used to identify cooperative programs which enroll students from several different occupational education areas under the supervision of diversified cooperative education coordinators who maintain contact with on-the-job supervisors to relay information to the respective occupational teachers regarding remedial, reinforcing, and specialized skills needed, as well as other essential supplemental instruction which each student requires to function satisfactorily on the job. Extension of the teaching certificate to that of diversified cooperative coordinator is necessary when multiple curriculum areas are represented in a single program. Students enrolled in "Diversified Co-Op" receive credit toward high school graduation.

State-Approved Sequence of Diversified Cooperative Occupational Education

A minimum of five units, to include:

- 1 unit -- Introduction to Occupations
- 1 unit -- Related General Instruction (State Curriculum)
- 1 unit --Related Occupational Instruction, selected from among the courses offered by the several Occupational Education disciplines:
  - Agriculture Education
  - Business Education
  - Health Occupations Education
  - Home Economics Education
  - Technical Education
  - Technology Education
  - Trade and Industrial Education
- 2 units -- On-the-Job Supervised Work (300 hours per unit)

Basic Criteria For An Approved Program Of Cooperative Occupational Education

1. The Board of Education has approved inclusion of cooperative occupational education as a program offering.
2. The students are employed under current State and Federal labor laws and regulations.

3. A written training agreement is in effect between the participating employer, the education agency, and the student.
4. A written training plan is used for each participating student.
5. Health and safety instruction appropriate for the job is provided before employment, and continued on the job.
6. In-school related occupational instruction (as well as required academic instruction) is provided to all participating students.
7. All students are meeting, or have met, academic requirements for graduation from high school.
8. Credit is awarded in relation to competencies being satisfactorily achieved on the basis of 150 hours being equal to 1/2-unit of credit, 300 hours to 1-unit of credit, 600 hours for a maximum of 2-units of credit.
9. The program is conducted by a teacher/coordinator certified in a single vocational subject, or by a diversified occupational education coordinator certified in more than one subject area.
10. The program has been approved by the State Education Department's Division of Occupational Education Instruction.

Further information on Cooperative Occupational Education Experience Programs is provided in the Cooperative Occupational Education Handbook: A Guide for School Administrators and Cooperative Occupational Education Coordinators, 1989 edition, which can be obtained from the Department's Bureau of Agriculture, Trade, and Technical Programs.

ADULT AND CONTINUING EDUCATION PROGRAMS

Regulation

Ed. L. 1712(3)

> Night schools wherein the common branches and such additional subjects as may be adapted to students applying for instruction . . . shall be maintained by the board of education and in each school district where twenty or more persons . . . over the age of sixteen years make applications for instruction in a high school . . . All night schools shall be free to all persons residing in the district.

Ed. L. 4604

> A board of education may also establish day and evening schools for adults such as . . . instruction in secondary academic and approved vocational (occupational) subjects . . .

Since entry-level skills and knowledge required for a given employment remain the same whether the person preparing for that employment is a secondary school student, out of school youth, or an adult, the appropriate secondary school occupational education curriculum, or pertinent sections thereof, is appropriate for an adult continuing education program. Similarly most occupational education programs of adult continuing education are offered by local school districts or Boards of Cooperative Educational Services and conducted in their facilities. Instructional strategies and methodologies will, however, differ to a lesser or greater degree as the characteristics of the adult students require.

Information regarding adult continuing occupational education may be obtained from:

Division of Continuing Education Programs
One Commerce Plaza, Room 1607
Albany, New York 12234
(518) 474-5808

POSTSECONDARY OCCUPATIONAL EDUCATION

As a generalization, postsecondary programs of occupational education can be placed in three categories:

1) Programs which substantially duplicate secondary level programs and are intended to serve those who, after being graduated from nonoccupational education secondary programs, discover a need for occupational education.

2) Programs which provide instruction in occupational education content which is entirely of an advanced nature, and which are intended for students who possess basic skills in the employment area.

3) Programs whose initial units of study are substantially the same as secondary level occupational educational programs, but which then provide more advanced study as part of the diploma or certificate program, and are intended to serve students who have experienced secondary level programs in the occupational area as well as those who have not.

The basic purpose of occupational education continues to be the preparation of students for entry into employment which requires less than a baccalaureate degree. Employment in our increasingly technological society not only requires concomitant change in many secondary level occupational education programs, but increases the importance of postsecondary occupational education programs. To serve students properly, secondary level administrators and counselors must be familiar with programs of occupational education offered at both the secondary and postsecondary levels. Further, teachers and administrators at each level should actively cooperate in providing programs which neither omit instruction in necessary skills and knowledge nor require students to repeat at the postsecondary level, study successfully completed at the secondary level.

Where a postsecondary program duplicates the secondary program, students should be made aware of the fact. Where the postsecondary program provides only advanced instruction, secondary educators should strive to ensure that their graduates possess the necessary foundation for entry into the program. Where the postsecondary program initially duplicates the secondary program before beginning advanced instruction, secondary level administrators should, wherever possible, secure an articulation agreement that provides advanced placement and/or credit allowance for qualified graduates of the secondary program. Articulation agreements should state the agencies' policies toward provision of advanced placement of students who have experienced appropriate instruction, as well as specifying the program content to be taught at each level. Letter(s) of intent should be filed with the State Education Department, to indicate the status of the articulation process, prior to initiation of the program.

An example of an articulated program is the Articulated 2 + 2 Technical Education Program which provides for six units of teacher contact time at the secondary school level and an additional two years of advanced training in the chosen technical field at the community college level. This program meets the objectives of collaborative-effort programs of occupational education and allows programs of Technical Education to be taught within the time available in all occupational education programs of local school districts and Boards of Cooperative Educational Services within New York State.

LOCALLY DEVELOPED CURRICULUM

Regulation

CR 100.2(n) Variances for programs and special focus schools.

Except as otherwise provided for State test or examination requirements pursuant to section 100.2(f) of this Part, the commissioner may grant variances from the provisions of this Part, upon a finding that a variance will enable a school to implement a program designed to provide excellence in education. A school or school district shall submit an application for a variance in a form prescribed by the commissioner at least six months in advance of the proposed starting date of the program. Such application shall set forth:

(1) the specific regulation(s) from which a variance is requested;

(2) the need for such variance;

(3) a detailed description of the program or activities which will be substituted for the requirement for which the variance is requested;

(4) the expected time needed to carry out the substitute program or activities;

(5) a plan for evaluating the substitute program or activities;

(6) the school or school district's agreement to submit a follow-up report to the commissioner within six months after conclusion of the substitute program or activities, and within one month after the end of each school year in the case of ongoing substitute programs or activities; and

(7) in lieu of the requirements set forth in paragraphs (2) through (6) of this subdivision, a statement, and supporting evidence, concerning the school's status of accreditation by a statewide or regional accrediting body recognized by the commissioner.

Policy

- If a school obtains a variance for a program to which a State test is connected, a variance will also be given for the testing, if it is requested. However, a variance will be given only if the school meets the provisions of Section 100.2(f) concerning the use of alternative examinations.
- Variances will be granted only where the school's objective is to provide excellence. Variances will not be granted where the objective, for example, is solely to reduce costs.
- For this purpose, excellence in education shall mean those activities and/or organizational changes which exceed minimum requirements and are not merely in lieu of them.
- Changes in an approved variance which significantly affect the objectives or student outcomes must be approved in advance. Requests to implement such changes should be made at least one month prior to projected implementation of such change, to the:

Office for Quality Assurance
The State Education Department
Room 675 EBA
Albany, New York 12234
(518) 473-7880

Local Education Agencies which perceive a need to modify any State sequence in occupational education set forth in this Handbook, **or to create a sequence in an area for which there is no State sequence,** must apply for and receive Department approval to do so. The application must conform to the provisions stated on, and be covered by, the completed form reproduced from the Appendix of this Handbook, and be submitted before March 1 preceding the September in which the new or modified sequence is to be initially offered, to the:

Division of Occupational Education Instruction
One Commerce Plaza, Room 1623
Albany, NY 12234
(518) 474-2451

Where application is for approval to modify the content of an existing State sequence, the single application should encompass all requested modifications to that sequence.

STUDENTS WITH HANDICAPPING CONDITIONS

Regulation

CR 100.2(s) Students with handicapping conditions.

(1) Each student with a handicapping condition, as such term is defined in section 200.1(cc) of this Title, shall have access to the full range of programs and services set forth in this Part to the extent that such programs and services are appropriate to such student's special educational needs.

(2) Instructional techniques and materials used by a school shall be modified to the extent appropriate to provide the opportunity for students with handicapping conditions to meet diploma requirements. At each annual review of a student's individualized education program, the committee on special education shall consider the appropriateness of such modifications.

Policy

- Students with handicapping conditions must have access to the total educational program as appropriate to their individual educational needs. During the annual review process, the Committee on Special Education must consider what instructional techniques and modifications are being provided so that appropriate recommendations for revisions can be made. Students with handicapping conditions who are also of limited English proficiency must receive bilingual Special Education services.

- The Committee on Special Education should consider occupational education courses appropriate to the student's individual needs, as part of the student's total educational program. The Committee should consider scheduling in occupational education during the early secondary grades, and reflect such recommendations in the Individual Education Plan (IEP).

Guidelines

- Prior to scheduling occupational education programs, the Committee on Special Education should consider conducting a vocational assessment whenever appropriate. The Committee's decision to recommend specific occupational education sequences should be based on the results of the vocational assessments and the individual strengths and needs of the student. It is most important that students with handicapping conditions receive both academic and occupational education, in order to acquire skills leading to a wide range of opportunities. Teachers holding certification in occupational education should serve as consultants to the Committee.

- Occupational education teachers providing instruction to students with handicapping conditions who are appropriately placed within their classes, should be provided information regarding the students' individual strengths, weaknesses, and educational needs. Such information may be obtained from the special education teachers, the Committees on the Special Education, or the students' IEPs.

- Teachers of occupational education subjects can obtain assistance from Special Education Training Resource Centers (SETRC), which provide inservice education and recommend alternative testing techniques and resources that can be applied to assist the teacher and improve students' educational experiences.

- The booklet, "Alternative Testing Techniques" can be obtained from the Office for Children with Handicapping Conditions.

Regulation

CR 100.2(k) **Nondiscrimination in curricular and extracurricular activities.**

No student shall be denied membership or participation, on the basis of race, sex, marital status, color, religion, national origin, or disability, in any program or activity which is included in a school program of curricular or extracurricular activities, provided that:

(1) in the case of students with handicapping conditions, such activity shall be appropriate to a student's special educational needs as identified by the committee on special education;

* * * * *

Policy

- School districts and BOCES may not discriminate in curricular programs or activities, on the basis of a student's handicap or disability. Included are admission policies and recruitment and admission activities, programs, and materials, and the delivery of the instructional program, encompassing instructional activities and materials.

- School districts and BOCES may not discriminate in extracurricular programs and activities, including occupational education student organizations, on the basis of a student's handicap or disability.

- School districts and BOCES which receive Federal financial assistance and offer a program of occupational education -- including pregrade 9 programs such as Introduction to Technology and Home and Career Skills -- may not discriminate or deny services on the basis of a handicapping condition.

- School districts and BOCES which receive federal financial assistance through the Carl D. Perkins Vocational Education Act must also meet that Act's requirement that access to quality occupational education programs by the handicapped must be ensured.

Guidelines

- School districts and BOCES must comply with provisions of the "Standards Governing Civil Rights in Vocational Education Programs," a publication of the New York State Education Department. This publication is based on the Federal Office for Civil Rights document "Vocational Education Programs Guidelines for Eliminating Discrimination and Denial of Services on the Basis of Race, Color, National Origin, Sex, and Handicap," and upon Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and Section 504 of the Rehabilitation Act of 1973.

- To conform to provisions set forth in the "Standards . . .," a counselor may not counsel a student to not enroll in a program because of a handicapping condition, simply because the counselor believes that the student's handicap will preclude success in the employment area for which the program is preparation.

  (Standards, Section 4.2(a): "A recipient may not counsel students to enroll in a particular course or program or measure or predict a student's prospects for success in any course or program on the basis of the student's . . . handicap."

  Standards, Section 3.2(c)(1): "A recipient may not use any selection criterion for entrance into a vocational education course or program that disproportionately excludes applicants on the basis of . . . handicap unless the recipient can demonstrate that the criterion has been validated as essential for participation in that particular program.")

Further, those properly validated prerequisites must be stated in objectively measurable terms. Such subjective provisions as "good" manual dexterity, "good" health, no "serious" allergies, and "average" physical strength are unacceptable.

- Effective communication among parents, special education teachers and occupational education teachers, and students will help implement full access to programs in a manner beneficial to the learner. Administrative support and direction in this area are critical to allowing students with handicapping conditions to meet their potential and to achieve at least minimum standards.

Occupational Education Civil Rights Coordinating Unit
Education Building Annex, Room 481
Albany, New York 12234
(518) 474-0585

OCCUPATIONAL EDUCATION SEQUENCES FOR SPECIAL EDUCATION STUDENTS

The following policies and guidelines are provided to assist local schools in determining how instruction specifically designed for students having handicapping conditions can be used as approved occupational education programs. Schools then must submit a new program for approval only in unique situations.

Policy

It is the Department's policy that students having handicapping conditions who are pursuing a high school diploma, must meet the same standards of occupational education sequences as other students. These requirements include completing Introduction to Occupations, an instructional program core, and specialized courses approved for a sequence. Students must also meet occupational education proficiency test requirements.

Department policies provide options for some students having handicapping conditions to use alternative techniques in completing the occupational education courses and proficiency tests.

1. To the maximum extent appropriate, students having handicapping conditions who are to be awarded course credit leading to a diploma should be in the regular programs of the high school which will award diploma credit for courses of study provided through specially designed instruction in that high school, or in a BOCES-operated program, or elsewhere, if the following conditions are met:

   a. If the principal of the school awarding the student's diploma determines that such courses are equivalent to occupational modules, courses, and/or programs, credit may be awarded based upon the student's successful completion of the performance objectives.

   b. When such instruction is provided through a BOCES operated program, then section 100(2)(w) of the Regulations of the Commissioner must be followed.

   c. Equivalent instruction means that the occupational education instruction has been modified to meet, in special classes, the needs of students having a handicapping condition. Instruction may be modified by either reducing the number of supporting competencies or extending the time needed to master the performance objectives.

2. Each student having a handicapping condition has an individualized education program (IEP), which is developed and reviewed annually by the district's Committee on Special Education (CSE).

   a. For those students recommended to receive occupational education, the IEP should indicate the type of occupational program, specialized equipment, adaptive devices, recommended testing modifications, and whether the student will participate in a regular or special education setting.

   b. Short-term objectives and methods of evaluating whether objectives are being met are developed for each special education program and service. Frequent conferences, involving occupational education teacher(s), parent(s) and others, such as BOCES personnel, should be held after the student's placement in special education, as well as annually.

   c. The method of periodically evaluating the student's progress should be consistent with methods used in regular classroom programs, and any alternative testing techniques to be used for testing should be specified in the IEP.

Guidelines

If the student having a handicapping condition is to be placed in a regular occupational setting, it has been determined that the student is capable of mastering the content, is accountable for such mastery, and can participate in such classes with nonhandicapped peers. It is important that occupational educators be aware of the types of support services which students having a handicapping condition may need in order to participate successfully in their classes.

A student having a handicapping condition may require occupational education in a special education setting. The student is then placed with other students having similar occupational and educational needs. Instruction in special education settings should be based on the competencies of the occupational education curriculum, but may need modification to meet the student's more intensive needs.

It is recommended that schools consider including the content of Introduction to Occupations within any multioccupational experience. When using credit earned in multioccupational programs as a portion of an occupational education sequence, the smallest quantity of credit which should be applied is one-half unit.

Additional information may be obtained from the:

Office for Education of Children with Handicapping Conditions
Educational Building Annex, Room 1073
Albany, New York 12234
(518) 474-5548

A reference manual, "A Guide to Occupational Education for Students With Handicapping Conditions," has been developed to assist occupational educators serving students having handicapping conditions. Teacher copies are available on request, from the:

Bureau of Occupational Education Program Development
One Commerce Plaza, room 1623
Albany, New York 12234
(518) 474-4806

SECTION V

IMPLEMENTING THE PROGRAM

Regulation

CR 100.1 Definitions. As used in this Part:

(a) Unit of study means at least 180 minutes of instruction per week throughout the school year, or the equivalent.

A unit of credit is earned by mastering the learning outcomes set forth in a New York State developed or locally developed syllabus for a given high school subject, after a student has had opportunity to complete a unit of study in the given subject matter area, or without completion of a unit of study, achieving a passing score of at least 85 percent or its equivalent on a Department approved examination in a given high school subject, and the successful completion of either an oral examination or a special project, pursuant to Section 100.5(d)(1) of Commissioner's Regulations.

Regulation

CR 100.2(w) Credit for BOCES programs.

(1) Each board of cooperative educational services (BOCES) shall determine the number of units of credit that will be earned by students successfully completing units of study in each of the instructional programs of the BOCES. The number of units of credit that may be earned for each program shall be determined after consultation with boards of education of the component school districts.

(2) In awarding credit toward a Regents or a local high school diploma, boards of education shall award to students who have successfully completed a BOCES program, the number of units of credit determined by the BOCES pursuant to paragraph (1) of this subdivision.

CR 100.2(h) Availability of occupational education.

(1) All public school districts shall offer students the opportunity to begin an approved occupational education sequence in ninth grade. Only those occupational education sequences which have been approved by the commissioner may be used to fulfill the requirements for a Regents or local diploma set forth in section 100.5 of this Part.

(2) For students first entering grade nine in 1985 and thereafter, each approved occupational education sequence shall include a minimum of one unit of credit in Introduction to Occupations, such instruction to be offered at any point in the sequence.

(3) For students first entering grade nine in 1988 and thereafter, approved sequences of three units of credit in an occupational education subject shall be so organized that they may be extended into approved sequences of five units of credit or more without loss of credit.

(4) For students first entering grade nine in 1988 and thereafter, approved sequences of five units of credit or more in occupational education shall be employment preparation sequences satisfactory to the commissioner.

SCHEDULING OF INSTRUCTION

One of the major recommendations of the Futuring Committees was that the State Education Department would hold principal responsibility for determining what should be taught, while local education agencies would hold principal responsibility for determining how it should be taught. In adopting this recommendation, the Department organized the new curriculum in a design calculated to allow the schools the greatest flexibility not only in the selection of instructional methodology but also in the scheduling of instruction in whatever ways best serve the needs of the students and the restrictions of local conditions, while conforming to pertinent provisions of Education Law and Commissioner's Regulations.

The programs of agriculture, health occupations, technical, and trade and industrial education achieve student learning through student doing, and development of student competence through practice. In these programs, instruction is activity-centered in the school laboratory/shop and, through field trips, in the community. A daily class session of more than a single period is necessary for effective presentation of this instruction, and efficient use of the students' time. These programs should be scheduled for from two to four consecutive periods, depending on the program and the length of periods. The programs of business/marketing, home economics, and technology education achieve student learning by similar means, but may be scheduled for a single period daily or for multiple periods.

Home and Career Skills

All personnel certificated in home economics education may teach all modules of the Home and Career Skills program. Personnel certificated in other instructional program areas may teach specific modules, as indicated below.

Module	Areas Whose Teachers May Teach
The Process (Problem Solving/ Decision Making)	Agricultural, Business/Marketing, Health Education, and Guidance
Personal Development	Health Education
Career Planning	Agricultural, Business/Marketing, and Guidance

Teachers certificated in these other areas, alone or in combination, cannot teach the entire Home and Career Skills program. A teacher certificated in home economics education must teach some part of the course and coordinate a team teaching approach.

Introduction to Technology

All personnel who hold certification in technology education/industrial arts or agriculture education, as a result of acquiring a baccalaureate degree, may teach all modules of the Introduction to Technology program. Personnel certified in science education may teach the modules listed below.

- How People Use Technology to Solve Problems (T-3)
- How Technology Affects People and Environment (T-5)
- Technology and Society: Now and in the Future (T-9)

Should science teachers teach these modules of Introduction to Technology, the instruction should be delivered in a laboratory setting and in a content sequence which ensures continuity of instruction.

Introduction to Occupations

All teachers certificated in an occupational education subject are eligible to teach the two required modules of Introduction to Occupations -- Personal Resource Management and The Working Citizen. The remaining modules of this program will be taught by personnel certificated within the various occupational education specialties.

Occupationally Related Mathematics

All personnel certified in mathematics education may teach Occupationally Related Mathematics. Teachers certified in occupational education subjects who possess the associate degree or the baccalaureate degree may have their certification extended to include the teaching of Occupationally Related Mathematics if their preparation includes, either as part of their degree study or subsequent to it, completion of six semester-hours of study of mathematics. Section 80.5 of Commissioner's Regulations has been amended to authorize the extension of occupational education teacher certification to include the teaching of Occupationally Related Mathematics. Each teacher who wishes to so extend an occupational education certificate must individually apply for the extension -- without regard to when the required study was completed.

Occupationally Related Science

All personnel certified in science education may teach Occupationally Related Science. Teachers certified in occupational education subjects who possess the associate degree or the baccalaureate degree may have their certification extended to include the teaching of Occupationally Related Science if their preparation includes, either as part of their degree study or subsequent to it, completion of six semester-hours of study of science. Section 80.5 of Commissioner's Regulations has been amended to authorize the extension of occupational education teacher certification to include the teaching of Occupationally Related Science. Each teacher who wishes to so extend an occupational education certificate must individually apply for the extension -- without regard to when the required study was completed.

FACILITIES AND EQUIPMENT

Apart from certain access and health and safety requirements, for example, ventilation, lighting, and fire prevention and containment, local school districts and BOCES have considerable freedom in determining the facilities and equipment to be provided. School administrators should, however, obtain detailed advice from their local occupational education advisory councils regarding the facilities and equipment necessary to provide effective programs in their locality.

Assistance in planning facilities and determining appropriate equipment can, and should, be obtained from the bureau of the Division of Occupational Education Instruction which is responsible for the particular occupational education program area. Facilities and equipment guides for each occupational education instructional program area can be obtained from the pertinent bureau of the Division of Occupational Education Instruction. A listing of each bureau's areas of responsibility is contained in the Appendix of this Handbook.

COMPREHENSIVE ASSESSMENT REPORT

Regulation

CR 100.2(m) Comprehensive assessment report.

By October 31st of each year, the State Education Department will submit to each school district and to each nonpublic school, State test results for their respective comprehensive assessment reports. On or before December 15th of each year, the superintendent of each school district shall submit the comprehensive assessment report to the board of education of such district at a public meeting.

(1) The comprehensive assessment report for each school district and nonpublic school will include the following information, for each school building and each school district, for the three school years immediately preceding the school year in which the report is issued:

(i) Student test data on all . . . occupational education proficiency examinations . . .

Policy

- The Comprehensive Assessment Report (CAR) requirement applies only to individual schools and school districts. Student test results in programs offered at BOCES will be reported in the Comprehensive Assessment Report through the student's home school.

- A manual is issued by the Department to assist local school officials to interpret and use the Comprehensive Assessment Report. The manual is especially useful in the providing of information to the public.

CONSULTANT/ADVISORY COMMITTEES

Regulation

CR 141.1 Establishment.

...Boards of education operating an occupational education program shall appoint an advisory council as provided in section 4601 of the Education Law.

Ed. L. 4601 Advisory councils.

1. The board of education of each school district and of each board of cooperative educational services maintaining an approved occupational education program shall appoint an advisory council for occupational education consisting of at least ten members. The membership shall include, but not be limited to, persons:

   a. Familiar with the vocational needs and problems of management and labor in the region.
   b. Familiar with programs of occupational education at the postsecondary and adult levels.
   c. Familiar with the manpower needs and requirements of the region to be served.
   d. Familiar with the special education needs of the physically and mentally handicapped.
   e. Representative of community interests, including persons familiar with the special needs of the population to be served.

2. It shall be the duty of such advisory council for occupational education to advise the board of education or board of cooperative education on the development of and policy matters arising in the administration of occupational education, including the preparation of long range and annual program plans submitted to the Commissioner of Education and assist with an annual evaluation of occupational education programs, services and activities provided by the school district or board of cooperative education.

3. Advisory councils may appoint consultant committees representative of specific occupational fields to assist in the work of the council and the board of education or board of cooperative education with respect to the planning, development and requirements for establishment of new programs or evaluation and revision of existing programs.

4. The board of education of any school district or the board of cooperative education services may employ such professional, technical and clerical personnel as may be necessary to enable the advisory council to carry out its functions specified in this section.

Policy Statement

Almost all successful occupational education programs are supported by, and demonstrate the benefits of, advisory councils and special consultant committees.

There should be a special consultant committee for each broad occupational area. It should be made up of representatives of operating management, employers, professional practitioners, knowledgeable civic leaders, public employment services, local employment security, students, former students, scientific or technical societies and associations in the field, and other interested specialists. The curriculum consultant committee usually is appointed by the board of education upon the recommendation of the advisory council when the initiation of a particular course or program is being considered by the institution. The advisory committee then should assist in making the necessary surveys of the need for the programs. They should be able to bring to an employer: available student population figures, curriculum design, faculty competencies, laboratory facilities and equipment, and cost and financing for the program.

When the studies indicate that a program should be initiated, the support and assistance of the committee is invaluable especially in planning, initiating, and providing public support for the program. When students graduate and seek employment, the committee should be concerned regarding effective placement and performance. Actual placement activity is not a committee function, but the field of placement of program graduates should be of concern in order to maintain constant awareness of supply, demand, and the extent to which occupational education is filling the needs of employers. Modifications often are made in the program as a result of these evaluations.

Other especially important matters in which employers and advisory persons can assist are providing consultants and part-time personnel to serve on the instructional staff and in cooperating to provide clinical, field, or cooperative employment experience in programs to educate students.

Guidelines:

- Liaison with Board of Education:
  The advisory council for occupational education serves to advise and assist the board of education. Although such advice may be concerned with the development of occupational education programs and/or policy matters in the administration of occupational education programs, final action and implementation are the prerogative of the board of education. Likewise, the advisory council may assist in the preparation of plans both for annual occupational education activity and long range projections, but final plan adoption is a prerogative of the board of education. In addition, annual evaluation of occupational education

programs, services, and activities provided by the board is an activity in which the advisory council may assist the board of education. Acceptance of findings of the advisory council is a matter for board deliberation and determination.

- Liaison with Director of Occupational Education:
  It is recommended that each board of education or board of cooperative educational services agree upon a policy regarding the relationship between the advisory council and the director of occupational education. In no case should policy adoption activity be assigned to either the council or the director of occupational education. Policy recommendations may originate from the council or from the director, but adoption of policy rests with the board of education. Policy concerning the relationship of the director to the council should include a statement concerning the direct access of the advisory council to the director of occupational education.

- Suggested Policy Concerning Role of Director of Occupational Education:
  Director should:
  a. inform the council of its functions and responsibility and of occupational education goals and objectives;
  b. utilize faculty and others to serve as resource to the council;
  c. acquaint the council with laws, rules, regulations and policies pertaining to occupational education;
  d. help develop meeting agenda and direct work of the councils to ensure focus on significant items which will contribute to the program of occupational education and effectively utilize the time and talents of council members; and
  e. provide opportunity for recognition of council members.

- Liaison with New York State Advisory Council on Vocational Education (NYSCOVE):
  Local advisory councils should become familiar with the activities of the State advisory council and should feel free to transmit recommendations to the State advisory council, particularly when concerns extend beyond the geographical boundary of primary concern of the local council. Such matters may include need for regional planning; impending change in the employment market involving the movement of large employers to or from the area; or statements concerning particularly successful local procedures worthy of consideration for regional or statewide adoption.

- Relationship with Representative Individuals and Organizations:
  The advisory council should obtain the opinions and recommendations of employees and employee groups, and of employers and employer groups representing those businesses and industries with which occupational education programs are, and should be, concerned.

- Coordination with Postsecondary and Adult Education Program:
  The advisory council should be informed concerning occupational education programs offered at local secondary schools as a part of continuing education, and also with programs at postsecondary institutions within the region served by the council. When appropriate, committees should hear representatives of such institutions within the region to clarify the respective roles of all institutions regarding occupational education offerings.

- Evaluation:
  It is the duty of the advisory council for occupational education to assist with an annual evaluation of occupational education programs, services, and activities provided by the school district or board of cooperative education. Such evaluation may involve the use of consultants, employers, populations directly served by the occupational education programs, occupational education staff, and others. Part-time, temporary consultant, and support and clerical assistance may be provided by the board of education within the provisions of Education Law.

Advisory committees usually serve without pay as interested citizens. The continued support of an advisory committee has been found to be a constant source of strength for the program and the most reliable means of keeping it up to date and of high quality.

APPENDIX

PURPOSES OF OCCUPATIONAL EDUCATION*

Occupational Education is a continuum of learning experiences in which students become aware of a broad spectrum of occupations, develop skills that are adaptable to personal and career roles, and prepare for entry into occupations. This continuum is part of a lifelong process through which individuals develop personal, family, social, economic, technological, and occupational competencies to meet the needs of self and society.

The following purposes reflect the belief that all components of the public education system should address several learner needs, and give high priority to the development of basic reading, writing, and computation competencies. Occupational Education must provide continued reinforcement and application of these concepts and skills.

Part I: SKILLS AND KNOWLEDGE TO BE DEVELOPED

Students who complete a program of Occupational Education should have:

- Acquired career awareness and the ability to make career and educational choices.
- Developed desirable employability traits such as promptness, dependability, adaptability, and self-reliance.
- Achieved self-awareness and realization of self-worth.
- Developed skills in problem solving, decision making, communication, interpersonal relations, and resource management.
- Developed an awareness of the role and responsibility of individuals, working alone or in groups, in shaping communities and society.
- Acquired knowledge of basic economic concepts.
- Developed the ability to manage a home, a family, and personal business affairs.
- Developed an awareness of, and positive attitude toward, safety procedures.
- Acquired the capacity for self-fulfilling use of leisure time.
- Developed an ability to take advantage of inevitable change.
- Acquired technological literacy (conceptual understanding of computers and communications systems).
- Developed skill in the technical writing, reading, and mathematics pertaining to a specific Occupational Education instructional program.
- Developed the ability to make practical application of acquired communication and computation skills.
- Acquired basic skills in use of common hand tools and machines, and understanding of various materials and work processes.
- Acquired basic technical skills common to a cluster of jobs.
- Developed technical skills essential to one specific job.

Part II: SERVICES TO BUSINESS/INDUSTRY

Programs of Occupational Education should:

- Provide services which help the student to make the transition from school to employment, or to more advanced education.
- Promote the right of every individual to select and prepare for a career, chosen without regard for traditional barriers.
- Be accessible to all people.
- Offer programs which relate to employment opportunities in the region or the State.
- Provide a supply of qualified graduates which is adequate to meet the work force needs of business and industry in the State.
- Be responsive to the needs of emerging occupations.
- Be in coordination with general education and postsecondary education, and with military and industrial training programs.
- Meet the short-term training needs of business and industry.
- Provide training or retraining for the unemployed and underemployed.
- Contribute to maintaining a trained labor force for national defense needs.
- Promote understanding of, and support for, the principles of the American economic system.
- Improve people's ability to be effective entrepreneurs.
- Prepare students to be responsive to changing management structures (e.g., shared decision making, quality circles).
- Develop students' understanding of the individual's responsibility for protecting the environment, for social and personal benefit.

*These Purposes were determined through the processes of the Futuring Project.

LIST OF INTRODUCTION TO OCCUPATIONS MODULES

The Working Citizen

Personal Resource Management

Human Relations/Decision Making

Human Development Careers/Parenting

Introduction to Foods and Human Nutrition

Introduction to the Economics of Work

Basic Communication Skills

Keyboarding

Keyboarding Applications

Information Technology

Visual Communications

Introduction to Keeping Business Records

Introduction to Natural Resources

Basic Systems of Construction*

Basic Systems of Manufacturing*

Basic Systems of Transportation*

Basic Systems of Energy*

Basic Systems of Communication*

Basic Mechanical Principles and Skills

Basic Mechanical Maintenance and Service Practices

Introduction to Plant Science

Introduction to Animal Science

Basic Electricity/Electronics*

Basic Technical Drawing*

Introduction to Reading Blueprints and Drawings

Introduction to Basic Textiles and Design

*The content of these modules is an inherent part of certain Technology Education courses.

SUMMARY OF CRITERIA FOR USING OCCUPATIONAL EDUCATION COURSES FOR GENERAL EDUCATION CREDIT

Occupational Education courses and occupationally related courses designed to satisfy the art requirements of Commissioner's Regulations should meet the following criteria.

The student shall:

- demonstrate knowledge and creativity essential to producing works of visual arts in several media;
- demonstrate mastery of skills and techniques essential to creating art products (e.g., drawing, painting, two- and three-dimensional design);
- demonstrate orally and in writing that he/she understands the diversity of the cultural heritages which have contributed to the visual arts;
- demonstrate orally and in writing that he/she is knowledgeable in the history of visual arts; and
- demonstrate orally and in writing that he/she has an understanding of aesthetic judgments and is able to apply them to works of art.

Occupational Education courses and occupationally related courses designed to satisfy the English requirements of Commissioner's Regulations should meet the following criteria.

The student shall:

- demonstrate the capacity to write to express self, to narrate, to explain, and to describe;
- demonstrate the capacity to write letters, poems, narratives, and reports which include description, persuasion, and exposition;
- demonstrate use of correct spelling, punctuation, and capitalization;
- demonstrate the capacity to listen and speak for social interaction, information and understanding, critical purpose, and pleasure;
- demonstrate the capacity to read for the acquisition, interpretation, and application of information, for aesthetic and personal response, and for critical and evaluative decision making;
- demonstrate broad reading experience with literary genre to respond as a discriminating reader, to analyze and effectively communicate the characteristics of literary genre, and to compare, contrast, and evaluate various literary types;
- demonstrate language usage as a matter of appropriateness and social acceptance; and
- demonstrate command of different levels of language usage.

Occupational Education courses and occupationally related courses designed to satisfy the social studies requirements of Commissioner's Regulations should meet the following criteria:

The student shall:

- demonstrate knowledge and understanding in one or another of the social sciences -- economics, political science, sociology, anthropology, geography, psychology -- or a topic of history (Courses may have a variety of titles or approaches, but the content, structure, and methodologies could include one or more of the disciplines listed.);

- demonstrate knowledge and understanding of the course at a learning level above the recommended State social studies program;

- demonstrate mastery of and ability to use, analyze, and apply, data gathering, problem solving, decision making, and interpersonal skills; and

- demonstrate verbally and in writing an understanding of the major concepts of Change, Citizenship, Culture, Empathy, Identity, Justice, Scarcity, Nation-State, Technology, Interdependence Environment, and Equality.

Occupational Education courses and occupationally related courses designed to satisfy health education requirements of Commissioner's Regulations must meet the following criteria:

The student shall:

- demonstrate knowledge of the physical and developmental stages of the human life cycle (infancy, childhood, puberty, adolescence, maturity) and the effect of health and disease upon the life cycle;

- demonstrate knowledge of the causes of emergencies related to accidents and sudden illness, such as respiratory or cardiac dysfunction and/or shock, and first aid techniques appropriate to such emergencies;

- demonstrate knowledge of the interrelationships of physical, mental/emotional, and social well-being in maintaining health, and of those factors which contribute to the promotion of mental and emotional health;

- demonstrate knowledge of parenting skills, and of the roles and responsibilities critical to promotion of family health;

- demonstrate knowledge, decision/making skills, and responsible behavior regarding the use of drugs, alcohol, and tobacco;

- demonstrate a knowledge of national and global environmental health problems and a knowledge of attitudes, skills, and services which contribute to a healthful environment;

- demonstrate a knowledge of how to select competent professional health care and other purchasable health services.

Occupational Education courses and occupationally related courses designed to satisfy the Regents science requirement of Commissioner's Regulations should meet the following criteria:

The student shall:

- demonstrate, at a level equivalent to other Regents sciences, knowledge of the natural world and of inquiry skills characteristic of the student's occupational field that does not substantially duplicate the other Regents sciences;

- demonstrate, at a level equivalent to other Regents sciences, the application of the knowledge and inquiry skills in problem solving situations characteristic of the student's occupational field;

- demonstrate, at a level equivalent to other Regents sciences, appropriate laboratory techniques, including safety practices, characteristic of the student's occupational field; and

- demonstrate, at a level equivalent to other Regents sciences, a comprehensive understanding of the laboratory experiences by completing satisfactory written reports.

CRITERIA FOR STATE-APPROVED PROGRAMS

State-approved programs are those programs which provide instruction within the framework of State criteria/standards for specific instructional areas. The criteria address such program components as sequences, teacher certification, facilities, equipment, and safety. Verifying that the programs continue to meet State standards will be among the duties performed by Department personnel during routine supervisory and technical assistance visits to the schools.

Criteria to be used in determining whether programs can be considered to be State-approved Programs follow, by instructional program area.

Agricultural Education:

These standards are considered to be essential to an approved program of agricultural education.

1. All programs have written courses of study, based on validated competencies needed for entry and advancement in employment or for advanced education programs, and are reviewed annually by the consultant committee, teacher, and administrator.

2. The instructional program contains the balance of class time, laboratory work, and occupational experience necessary to adequately prepare students for employment or advanced educational programs.

3. Instruction in safety is provided in advance of any shop or laboratory work, and evidence of continuous safety instruction of each student is maintained by the instructor.

4. Students are engaged in supervised agriculture experience programs that are related to their occupational objectives, and are within their ability.

5. FFA Leadership Development activities are an integral part of the instructional program. Each teacher advises students in planning and conducting FFA activities as a component of instruction.

6. The classrooms, shops, and laboratory stations meet State Education Department specifications for the number of students enrolled and type of agricultural program conducted.

7. The instructor is certified in the specialty field taught and possesses the personal, technical, professional, and occupational competencies necessary to prepare students for entry-level employment or for advanced education programs.

8. The teaching assignment per instructor conforms to the student-teacher ratio stated in the specialty field standards. The assigned junior-senior high school and adult teaching load reflects the time demands of student enrollment, work experience supervision, FFA advising, and adult instruction.

9. The Agriculture/Agribusiness/Agriscience program is an integral part of the local district and regional plan for vocational education.

10. An Agriculture/Agribusiness/Agriscience program consultant committee is formed and meets at least twice a year, to help determine program needs and to assist in promotion and evaluation of the program.

11. The instructor, in cooperation with the school counselor and/or work experience coordinator, assists in the counseling, placement, and follow-up of students.

12. The instructional program provides at least the minimum units of study required for a State-approved sequence.

Business/Marketing Education:

1. Business/Marketing program offerings and instruction reflect the objective of preparing students for entry-level employment and/or postsecondary education.

2. Each instructional course is based on the State syllabus. Sequence options available to students are State developed or State approved sequences.

3. An evaluation system conforming to State testing requirements is implemented to measure student and program success.

4. The program is designed to ensure a balance of classroom instructional time, laboratory or hands-on activities, and occupational experiences.

5. Student leadership development activities are an integral part of the instructional program. Participation in Future Business Leaders of America and Distributive Education Clubs of New York State is strongly encouraged.

6. Instructors must possess Business/Marketing certification.

7. Equipment typical of that used in business and industry must be available to meet instructional objectives.

Health Occupations Education:

1. Health Occupations Education personnel, together with advisory groups and other appropriate personnel, have developed a clear statement of philosophy and objectives for the program.

2. Evidence of need data must substantiate employment needs.

3. Teachers hold specific certification and/or licenses in the specialty field and possess the personal, professional, and occupational competencies in the specialty areas necessary to prepare the student.

4. Each instructional program is based on the State syllabus or developed in cooperation with the local advisory committee of specialists and health industry representatives and approved by the Department.

5. The instructional program is designed to prepare the students for entry-level employment or continued postsecondary education. The program design includes three major components: theory content, supervised laboratory practice, and supervised clinical experience. Evaluation is an integral part of the instructional process.

6. The teacher/student ratio conforms to the ratio stated in the specialty field standards.

7. Student policies are written, specific, and clearly defined.

8. Student leadership development is an integral part of the Health Occupations Education program.

9. Classrooms and laboratory stations meet or exceed State minimum specifications. Safety requirements are met in each classroom and laboratory. Laboratory equipment and supplies are adequate for the number of students enrolled.

10. All programs will meet the basic Health Occupations Education sequence and testing requirements. An agency considering the implementation of sequences other than State-developed sequences, must apply for and receive State approval thereof.

Home Economics Education

1. A current, comprehensive philosophical mission statement is written, and is the basis of program design for Home Economics Education.

2. Instructional staff is conversant with the mission statement. The instructional program reflects the stated philosophy through experiences designed to meet the needs of all students.

3. The program is laboratory-based, includes a major hands-on component and involves instruction designed to prepare students to meet their responsibilities as parents or other members of families, and as consumers, wage earners, and home managers.

4. All students, regardless of their race, sex, creed, national origin or special needs, are admitted to and served by the Home Economics Education Program.

5. Instructors possess New York State Certification to teach Home Economics Education.

6. Administration and supervision are provided at all levels, to ensure a well-managed and comprehensive Home Economics Education Program.

7. Adequate facilities and supplies are provided. Support systems are provided which ensure the human, physical, and financial resources necessary to attain program goals and objectives.

8. Written curricula, based on State syllabi, are developed and utilized. These include goals, skills, and concepts to be developed, student performance objectives, and instructional strategies.

9. Various methods and media are utilized to inform and involve the educational community, the lay public, business, educators, and government, to generate support and ensure full program implementation.

10. A written, comprehensive safety and health plan is implemented to ensure safe working conditions and practices.

11. A systematic, continuous evaluation program exists and uses standards to assess all elements of the Home Economics Education Program.

12. Student leadership activities are an integral part of the instructional program.

Technical Education

1. An industrial survey is filed with the State Education Department, indicating a need and job opportunities, for the types of technicians for which education is provided.

2. Agency planning documents, including Annual Occupational Education plans and CO-SER applications, justify program need based on labor, economic, and student data.

3. The program is designed to prepare students for entry-level employment at the technician level, continued postsecondary technical training, or as a component of an Articulated 2 + 2 Technical Program.

4. Programs articulated between high school and two-year college agencies have letters of intent filed with the State Education Department, and a written agreement for operating the program.

5. A Technical Education consultant committee is established and annually reviews the program.

6. The course content and sequences are consistent with the elements of the State Education Department curriculum cluster outlines, or have been submitted to, and approved by, the Department.

7. An industrial panel has reviewed the program's curriculum.

8. Students must receive Technical Program orientation and be recommended for entrance.

9. There is a recruitment program intended to achieve equal members of male and female students enrolled.

10. Students entering the program have the prerequisites appropriate to the concentration area.

11. Assurance that students will have prerequisites is filed with the State Education Department.

12. Students are enrolled in corequisite courses of related mathematics and science required for the specific technology.

13. The instructor possesses New York State Technical Education teacher certification.

14. Equipment and supplies, typical of those used in industries for which the program prepares, are provided in quantities sufficient to meet the instructional objectives.

15. All safety procedures and standards comply with local, State, and federal regulations, as applicable to schools.

16. An evaluation system, conforming to State requirements, exists to determine program success and improvement needs.

17. A follow-up program is in place, to secure information on completors necessary to program evaluation and improvement.

Technology Education Programs

1. A current, comprehensive philosophical mission statement is written, and is the basis of program design for Technology Education.

2. Instructional staff is conversant with the mission statement. The instructional program reflects the stated philosophy through experiences designed to meet the needs of all students.

3. The program is laboratory-based, is 75% hands-on-learning, and involves instruction in and utilization of modern tools, machines, and devices used in the workplace and at home.

4. Students, regardless of their race, sex, creed, national origin or special needs, are served by the Technology Education Program.

5. Instructors possess New York State certification to teach Technology (Industrial Arts) Education. The instructional staff is both professionally and technically competent to provide students with a quality, comprehensive Technology Education program.

6. Administration and supervision are provided at all levels to ensure a well-managed and comprehensive Technology Education Program.

7. Adequate facilities and supplies are provided. Support systems are provided which ensure the human, physical, and financial resources necessary to attain program goals and objectives.

8. Written curricula based on State syllabi are developed and utilized. These include goals, skills, and concepts to be developed, student performance objectives, and instructional strategies.

9. Various methods and media are utilized to inform and involve the educational community, the public, business, educators, and government, to generate support and ensure full program implementation.

10. A written, comprehensive safety and health plan is implemented to ensure safe working conditions and practices.

11. A systematic, continuous evaluation program exists and uses standards to assess all elements of the Technology Education Program.

Trade and Industrial Education

1. An industrial survey indicates a need for, and job opportunities in, the types of occupations for which training is proposed.

2. Agency planning documents, including and CO-SER applications, justify program need based on labor, economic, and student data.

3. The program is designed to prepare students for entry-level employment and/or continued postsecondary education.

4. Programs articulated between high school and two-year college agencies have letters of intent filed with the State Education Department, and a written agreement for operating the program.

5. A Trade Education consultant committee is established and annually reviews the program.

6. The course content and sequences must be consistent with the elements of the State Education Department curriculum cluster outlines, or have been submitted to, and approved by, the Department.

7. An industrial panel has reviewed the proposed curriculum.

8. The instructor possesses specific New York State Trade Education teacher certification.

9. Equipment and supplies, typical of those used in industries for which the program prepares, are provided in quantities sufficient to meet the instructional objectives.

10. All safety procedures and standards comply with local, State, and federal regulations, as applicable to schools.

11. An evaluation system, conforming to State requirements, exists to determine program success and improvement needs.

12. A system to follow-up completors is in place, to secure information necessary to program evaluation and improvement.

STUDENT LEADERSHIP ORGANIZATIONS

Programs for Which One-Half Unit of Credit May Be Awarded To Meet The Social Studies IV "Participation In Government Requirement."

I. General Description -- A series of activities, conducted by students and managed by a teacher-advisor, designed specifically to develop;
   1. knowledge of how public policy is formed, implemented, and evaluated;
   2. knowledge of how citizens can directly or indirectly interact with public policy development processes; and
   3. the skills necessary to participate effectively in a democratic society.

II. Structure -- A 2 year program of activities is recommended, within a formal chapter of one of the Occupational Education Student Leadership Organizations:

Distributive Education Clubs of America	(DECA)
Future Business Leaders of America	(FBLA)
National FFA Organization	(FFA)
Future Homemakers of America	(FHA)
Health Occupations Students of America	(HOSA)
Technology Education Student Association	(TESA)
Vocational Industrial Clubs of America	(VICA)

III. Format and Requirement -- Members of Student Leadership Organizations (S.L.O.) may meet "Participation in Government" requirements through the programs of their S.L.O. chapter, if their activities meet these criteria:
   1. A formal training plan, prepared jointly by the student and the chapter advisor, which details a 2-year procedure for development of the objectives stated within this program description, is submitted to a local school administrator.
      a. Students will meet with the chapter advisor on one day each week.
      b. Specific activities will be planned, managed, and evaluated during these meetings, which will provide to students the opportunity to apply the skills and knowledge acquired in a variety of the courses of their education programs.
   2. Ten appropriate activities in each of the two years, approved by the chapter advisor as relevant to participation in government, are successfully completed.
   3. A log outlining their participation in a project that evidences participation in government -- identifying, planning, and implementing action toward resolving a societal problem -- is submitted to, and approved by, the chapter advisor.
   4. State Advisors of the respective Organizations will award special certificates to students successfully completing this program, in recognition of their achievements.

IV. Objectives and Sample Supporting Activities
   1. Objectives
      a. To develop in each student an appreciation and understanding of civic mindedness.
      b. To enrich each student's understanding and appreciation of Civic Intelligence and Civic Literacy.
      c. The student will demonstrate ability to identify societal issues, and plan their resolution, by participating in the planning of a civic project sponsored by the school, the Student Leadership Organization chapter, or a community organization.
      d. The student will demonstrate knowledge and appreciation of the civic enterprise necessary to attain desired goals.
   2. Sample Supporting Activities
      a.1. The student will participate in five formal meetings of the chapter each school year.
      a.2. The student will demonstrate a working knowledge of parliamentary procedure by effectively chairing a chapter or committee meeting.

a.3. The student will participate in a campaign for local, State, or national office of a Student Leadership Organization, either as a candidate for office or as a member of a candidate's campaign team.

b.1. The student will attend a minimum of two meetings of State or local government agencies, e.g., a board of education, in which public policy is made or debated.

b.2. The student will demonstrate knowledge of the political process, and ability to express informed judgments, by satisfactorily completing one of the following:

- participation in a formal debate;
- delivery of a prepared speech;
- participation in a panel discussion;
- completion of an essay or editorial for the local or school newspaper or chapter newsletter; or
- composition of a letter to the appropriate representative in State or national government.

c.1 DECA -- 7-UP/MDA Civic Consciousness Project
c.2 FBLA -- March of Dimes
c.3 FFA -- BOAC -- Building Our American Communities
c.4 FHA -- All Star Program
c.5 FHA -- All Star Project
c.6 FHA -- Community Service Award
c.7 TESA -- Outstanding Chapter
c.8 VICA -- Outstanding Club
c.9 HOSA -- Children's Miracle Network Telethon

d.1 The student will participate in the implementation of a civic consciousness project sponsored by the school, Student Leadership Organization, or a community organization.

d.2 The student will formally evaluate the results of the civic consciousness project in which he or she was involved.

V. Program Outline -- It is recommended that instruction be delivered over a 2-year period, through a combination of class and chapter meetings and structured activities.

1. Leadership
   - definition
   - characteristics
   - styles
2. Communication
   - oral
     public speaking
     debating
   - written
     business letters
     essays
     news releases
3. Organizational Structures
   - use of committees and quality circle
   - types of committees
   - officers and responsibilities
   - constitution and by laws
4. Conducting a Meeting
   - parliamentary procedure/shared decision making
   - motivational techniques
     basic needs
     individual differences
     self-image/self-worth

5. Democracy
   - importance to leadership
   - importance to organizations
   - role of citizens
   - role in formation of public policy
6. Committee Activities
   - selecting (program of work)
   - planning (decision making/problem solving)
   - evaluating
7. Goal Setting
   - long-term vis-a-vis short-term
   - group dynamics
   - human relations
8. Social Responsibility
   - citizens'
   - organizations'
9. Managing a Project
   - identifying problems or issues
   - identifying solutions
   - identifying resources
   - time management
   - implementation
   - evaluation

Students successfully completing this program will be awarded 1/2-unit of credit for the "Participation in Government" component of Social Studies IV.

DEFINITION OF TERMS

Used In This Handbook

Instructional Program Area

One of the Occupational Education disciplines: Agriculture, Business/Marketing, Health Occupations, Home Economics, Technical Education, Technology Education, and Trade and Industrial Education.

Program Cluster

A grouping of programs in one of the instructional program areas, consisting of study of closely related occupations, e.g., Construction Industry and Building Maintenance Occupations.

Program

Discrete instruction which assists students to acquire a specific group of skills and knowledge, usually requires one unit of study or more, and may be completed in one school year or less.

Course

Discrete instruction which assists students to acquire a specific group of skills and knowledge, requires one unit of study or less, and may be completed in one school year or less.

Sequence

A combination of courses and/or programs which have related content, prepare students for an occupation or a cluster of occupations, and may be used in satisfaction of high school diploma requirements.

Core Program

One or more courses in one instructional program area which are required components of all sequences in that instructional program area.

Employment Preparation Sequence

A sequence of units of instruction the primary outcome of which is the acquisition of the skills and knowledge of first-year workers in a specific occupation or cluster of closely related occupations which do not require the baccalaureate or graduate degree for entry.

Immediate Employment

Employment begun subsequent to being graduated from a secondary school, and preceeding full-time enrollment in a college or other withdrawal from the labor market.

Prepared for Immediate Employment

Capable of obtaining and maintaining skilled employment.

Prepared for Postsecondary Education

Capable of entering full-time study in a degree program without need of remediation.

PROGRAM RESPONSIBILITIES OF THE BUREAUS
of the
DIVISION OF OCCUPATIONAL EDUCATION INSTRUCTION

Division Office: (518) 474-2451; Room 1623, One Commerce Plaza, Albany, NY 12234

Bureau of:

Agriculture, Trade, and Technical Programs (AT&TP); Room 1621, 474-4802

Business and Health Occupations Programs (B&HOP); Room 1621, 474-6240

Home Economics and Technology Education Programs (HE&TEP); Room 1619, 474-3954

Occupational Education Program Development (OEPD); Room 1623, 474-4806

Instructional Program	Bureau*
Agriculture Programs	AT&TP
Business/Marketing Programs	B&HOP
Cooperative Occupational Education Programs	AT&TP
Health Occupations Programs	B&HOP
Home and Career Skills Programs (Grades 6-8)	HE&TEP
Home Economics Programs	HE&TEP
Introduction to Occupations	OEPD
Introduction to Technology (Grades 6-8)	HE&TEP
Occupationally Related Mathematics and Science	OEPD
Technical Education Programs	AT&TP
Technology Education Programs	HE&TEP
Trade and Industrial Education Programs	AT&TP
Aviation	
Construction and Building Maintenance	
Cosmetology	
Criminal Justice	
Drafting	
Electronics/Electromechanical	
Graphics, Printing, and Visual Communications	
Metalworking	
Motorcycle, Marine, Outdoor Power Equipment	
Vehicle Maintenance and Repair	
Special Four-Unit Drafting Sequence	Division Office

*Each Bureau can provide copies of the curricula of its respective areas of program responsibility.

OCCUPATIONAL EDUCATION
SEQUENCE APPROVAL APPLICATION

This application is for approval to modify an existing State sequence in Occupational Education.

This application is for approval of an occupational education sequence developed locally for an area not covered by a State sequence.

School and/or District _____

Address _____

Contact Person (and Title) _____

Telephone Number _____

The State Sequence to be Modified, or _____

Occupational Area of Locally Developed Sequence _____

Submitted by: _____
Superintendent of Schools

_____
Date

This completed application form must cover a clear and concise statement describing the modification or substitution of sequence for which approval is sought, in terms of:

purpose of the modification or substitution;

time allocated/credit to be awarded;

means of evaluating student success;

adequacy of facilities, equipment, resources;

teacher adequacy -- numbers, qualifications, and certification;

justification for deviating from State sequence (if modification request);

requested duration of approval;

evidence of Advisory Committee recommendations;

evidence of Board of Education commitment.

One copy of the proposed substitute sequence, including outlines of all sequence components, must be attached. Outlines should be organized by module topic, and state the projected instructional time, the performance objective(s), and the probable instructional strategies of each topic.

Two copies of the entire application package must be submitted, no less than six months before the program is to be implemented, to:

Division of Occupational Education Instruction
One Commerce Plaza, Room 1623
Albany, New York 12234

The State Education Department does not discriminate on the basis of age, color, creed, disability, marital status, veteran status, national origin, race, or sex in the educational programs and activities which it operates. This policy is in compliance with Title IX of the Education Amendments of 1972.

Inquiries concerning this policy may be referred to the Department's Affirmative Action Officer, Education Building, Albany, NY 12234.